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ESSAYS

ON THE

INTELLECTUAL POWERS

OF MAN.

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By THOMAS REID, D.D. F.R.S.E.
PROFESSOR OF MORAL PHILOSOPHY
IN THE UNIVERSITY OF GLASGOW.

Who hath put wiſdom in the inward parts? JOB.

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TO

MR DUGALD STEWART,

LATELY PROFESSOR OF MATHEMATICS,

NOW PROFESSOR OF MORAL PHILOSOPHY,

AND

DR JAMES GREGORY,

PROFESSOR OF THE THEORY OF PHYSIC,

In the Univerſity of Edinburgh.

MY DEAR FRIENDS,

I KNOW not to whom I can addreſs theſe Eſſays with more propriety than to You; not only on account of a friendſhip begun in early life on your part, though in old age on mine, and in one of you I may ſay hereditary; nor yet on account of that correſpondence in our literary purſuits and amuſements, which has always given me ſo great pleaſure; but becauſe, if theſe Eſſays have any merit, you have a conſiderable ſhare in it, having not only encouraged me to hope that

they may be uſeful, but favoured me with your obſervations on every part of them, both before they were ſent to the Preſs and while they were under it.

I have availed myſelf of your obſervations, ſo as to correct many faults that might otherwiſe have eſcaped me; and I have a very grateful ſenſe of your friendſhip, in giving this aid to one, who ſtood much in need of it; having no ſhame, but much pleaſure, in being inſtructed by thoſe who formerly were my pupils, as one of you was.

It would be ingratitude to a man whoſe memory I moſt highly reſpect, not to mention my obligations to the late Lord KAMES for the concern he was pleaſed to take in this Work. Having ſeen a ſmall part of it, he urged me to carry it on; took account of my progreſs from time to time; reviſed it more than once, as far as it was carried, before his death; and gave me his obſervations on it, both with reſpect to the matter and the expreſſion. On ſome points we differed in opinion, and debated them keenly, both in converſation and by many letters, without any abatement of his affection, or of his zeal for the Work's being carried on and publiſhed: For he had too much liberality of mind not to allow to

others

others the ſame liberty in judging which he claimed to himſelf.

It is difficult to ſay whether that worthy man was more eminent in active life or in ſpeculation. Very rare, ſurely, have been the inſtances where the talents for both were united in ſo eminent a degree.

His genius and induſtry, in many different branches of literature, will, by his works, be known to poſterity: His private virtues, and public ſpirit, his aſſiduity, through a long and laborious life, in many honourable public offices with which he was entruſted, and his zeal to encourage and promote every thing that tended to the improvement of his country in laws, literature, commerce, manufactures and agriculture, are beſt known to his friends and cotemporaries.

The favourable opinion which He, and You my Friends, were pleaſed to expreſs of this Work, has been my chief encouragement to lay it before the Public; and perhaps, without that encouragement, it had never ſeen the light: For I have always found, that, without ſocial intercourſe, even a favourite ſpeculation languiſhes; and that we cannot help thinking the better of our own opinions when

when they are approved by thoſe whom we eſteem good judges.

You know that the ſubſtance of theſe Eſſays was delivered annually, for more than twenty years, in Lectures to a large body of the more advanced ſtudents in this Univerſity, and for ſeveral years before, in another Univerſity. Thoſe who heard me with attention, of whom I preſume there are ſome hundreds alive, will recogniſe the doctrine which they heard, ſome of them thirty years ago, delivered to them more diffuſely, and with the repetitions and illuſtrations proper for ſuch audiences.

I am afraid, indeed, that the more intelligent reader, who is converſant in ſuch abſtract ſubjects, may think that there are repetitions ſtill left, which might be ſpared. Such, I hope, will conſider, that what to one reader is a ſuperfluous repetition, to the greater part, leſs converſant in ſuch ſubjects, may be very uſeful. If this apology be deemed inſufficient, and be thought to be the dictate of lazineſs, I claim ſome indulgence even for that lazineſs, at my period of life.

You

You who are in the prime of life, with the vigour which it inſpires, will, I hope, make more happy advances in this or in any other branch of ſcience to which your talents may be applied.

GLASGOW-COLLEGE,
June 1. 1785.

THO. REID.

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PREFACE.

HUMAN knowledge may be reduced to two general heads, according as it relates to body, or to mind; to things material, or to things intellectual.

The whole ſyſtem of bodies in the Univerſe, of which we know but a very ſmall part, may be called the Material World; the whole ſyſtem of minds, from the infinite Creator to the meaneſt creature endowed with thought, may be called the Intellectual World. Theſe are the two great kingdoms of nature that fall within our notice; and about the one, or the other, or things pertaining to them, every art, every ſcience, and every human thought is employed; nor can the boldeſt flight of imagination carry us beyond their limits.

Many things there are indeed regarding the nature and the ſtructure both of body and of mind, which our faculties cannot reach; many difficulties which the ableſt Philoſopher cannot reſolve; but of other natures, if any other there be, we have no knowledge, no conception at all.

That every thing that exiſts muſt be either corporeal or incorporeal, is evident. But it is not ſo evident, that every thing

that exiſts muſt either be corporeal, or endowed with thought. Whether there be in the Univerſe, beings, which are neither extended, ſolid and inert, like body, nor active and intelligent, like mind, ſeems to be beyond the reach of our knowledge. There appears to be a vaſt interval between body and mind, and whether there be any intermediate nature that connects them together, we know not.

We have no reaſon to aſcribe intelligence, or even ſenſation, to plants; yet there appears in them an active force and energy, which cannot be the reſult of any arrangement or combination of inert matter. The ſame thing may be ſaid of thoſe powers by which animals are nouriſhed and grow, by which matter gravitates, by which magnetical and electrical bodies attract and repel each other, and by which the parts of ſolid bodies cohere.

Some have conjectured that the phænomena of the material world which require active force, are produced by the continual operation of intelligent beings: Others have conjectured, that there may be in the Univerſe, beings that are active without intelligence, which, as a kind of incorporeal machinery, contrived by the ſupreme Wiſdom, perform their deſtined taſk without any knowledge or intention. But, laying aſide conjecture, and all pretences to determine in things beyond our reach, we muſt reſt in this, that body and mind are the only kinds of being of which we can have any knowledge, or can form any conception. If there are other kinds, they are not diſcoverable by the faculties which God hath given us; and, with regard to us, are as if they were not.

As

As therefore all our knowledge is confined to body and mind, or things belonging to them, there are two great branches of philoſophy, one relating to body, the other to mind. The properties of body, and the laws that obtain in the material ſyſtem, are the objects of natural philoſophy, as that word is now uſed. The branch which treats of the nature and operations of minds has by ſome been called Pneumatology. And to the one or the other of theſe branches, the principles of all the ſciences belong.

What variety there may be of minds or thinking beings throughout this vaſt Univerſe, we cannot pretend to ſay. We dwell in a little corner of God's dominion, disjoined from the reſt of it. The globe which we inhabit is but one of ſeven planets that encircle our ſun. What various orders of beings may inhabit the other ſix, their ſecondaries, and the comets belonging to our ſyſtem; and how many other ſuns may be encircled with like ſyſtems, are things altogether hid from us. Although human reaſon and induſtry have diſcovered with great accuracy the order and diſtances of the planets, and the laws of their motion, we have no means of correſponding with them. That they may be the habitation of animated beings is very probable; but of the nature, or powers of their inhabitants, we are perfectly ignorant. Every man is conſcious of a thinking principle or mind in himſelf; and we have ſufficient evidence of a like principle in other men. The actions of brute animals ſhow that they have ſome thinking principle, though of a nature far inferior to the human mind. And every thing about us may convince us of the exiſtence of a ſupreme mind, the Maker and Governor of the Univerſe. Theſe are all the minds of which reaſon can give us any certain knowledge.

The mind of man is the nobleſt work of God which reaſon diſcovers to us, and therefore, on account of its dignity, deſerves our ſtudy. It muſt indeed be acknowledged, that although it is of all objects the neareſt to us, and ſeems the moſt within our reach, it is very difficult to attend to its operations ſo as to form a diſtinct notion of them; and on that account there is no branch of knowledge in which the ingenious and ſpeculative have fallen into ſo great errors, and even abſurdities. Theſe errors and abſurdities have given riſe to a general prejudice againſt all enquiries of this nature. Becauſe ingenious men have, for many ages, given different and contradictory accounts of the powers of the mind, it is concluded, that all ſpeculations concerning them are chimerical and viſionary.

But whatever effect this prejudice may have with ſuperficial thinkers, the judicious will not be apt to be carried away with it. About two hundred years ago, the opinions of men in natural philoſophy were as various, and as contradictory, as they are now concerning the powers of the mind. GALILEO, TORRICELLI, KEPLER, BACON, and NEWTON, had the ſame diſcouragement in their attempts to throw light upon the material ſyſtem, as we have with regard to the intellectual. If they had been deterred by ſuch prejudices, we ſhould never have reaped the benefit of their diſcoveries, which do honour to human nature, and will make their names immortal. The motto which Lord BACON prefixed to ſome of his writings was worthy of his genius, *Inveniam viam aut faciam.*

There is a natural order in the progreſs of the ſciences, and good reaſons may be aſſigned why the philoſophy of body ſhould be

be *elder ſiſter* to that of mind, and of a quicker growth; but the laſt hath the principle of life no leſs than the firſt, and will grow up, though ſlowly, to maturity. The remains of ancient philoſophy upon this ſubject, are venerable ruins, carrying the marks of genius and induſtry, ſufficient to inflame, but not to ſatisfy, our curioſity. In later ages, DES CARTES was the firſt that pointed out the road we ought to take in thoſe dark regions. MALEBRANCHE, ARNAUD, LOCKE, BERKELEY, BUFFIER, HUTCHESON, BUTLER, HUME, PRICE, Lord KAMES, have laboured to make diſcoveries; nor have they laboured in vain. For, however different and contrary their concluſions are, however ſceptical ſome of them, they have all given new light, and cleared the way to thoſe who ſhall come after them.

We ought never to deſpair of human genius, but rather to hope, that, in time, it may produce a ſyſtem of the powers and operations of the human mind, no leſs certain than thoſe of optics or aſtronomy.

This is the more devoutly to be wiſhed, that a diſtinct knowledge of the powers of the mind would undoubtedly give great light to many other branches of ſcience. Mr HUME hath juſtly obſerved, that "all the ſciences have a relation to human nature; and, however wide any of them may ſeem to run from "it, they ſtill return back by one paſſage or another. This is "the centre and capital of the ſciences, which being once maſters of, we may eaſily extend our conqueſts every where."

The faculties of our minds are the tools and engines we muſt uſe in every diſquiſition; and the better we underſtand their nature

nature and force, the more ſucceſsfully we ſhall be able to apply them. Mr LOCKE gives this account of the occaſion of his entering upon his Eſſay concerning human underſtanding: "Five "or ſix friends (ſays he) meeting at my chamber, and diſcourſing "on a ſubject very remote from this, found themſelves quickly "at a ſtand, by the difficulties that roſe on every ſide. After "we had for a while puzzled ourſelves, without coming any "nearer to a reſolution of thoſe doubts that perplexed us, it "came into my thoughts that we took a wrong courſe; and "that, before we ſet ourſelves upon enquiries of that nature, "it was neceſſary to examine our own abilities, and ſee what "objects our underſtandings were fitted or not fitted to deal "with. This I propoſed to the company, who all readily aſſent-"ed; and thereupon it was agreed that this ſhould be our firſt "Enquiry." If this be commonly the cauſe of perplexity in thoſe diſquiſitions which have leaſt relation to the mind, it muſt be ſo much more in thoſe that have an immediate connection with it.

The ſciences may be diſtinguiſhed into two claſſes, according as they pertain to the material or to the intellectual world. The various parts of Natural Philoſophy, the mechanical Arts, Chemiſtry, Medicine, and Agriculture, belong to the firſt; but, to the laſt, belong Grammar, Logic, Rhetoric, Natural Theology; Morals, Juriſprudence, Law, Politics, and the fine Arts. The knowledge of the human mind is the root from which theſe grow, and draw their nouriſhment. Whether therefore we conſider the dignity of this ſubject, or its ſubſerviency to ſcience in general, and to the nobleſt branches of ſcience in particular, it highly deſerves to be cultivated.

A very elegant writer, on the *ſublime and beautiful*, concludes his account of the paſſions thus: "The variety of the paſſions is "great, and worthy, in every branch of that variety, of the "moſt diligent inveſtigation. The more accurately we ſearch "into the human mind, the ſtronger traces we every where "find of his wiſdom who made it. If a diſcourſe on the "uſe of the parts of the body may be conſidered as a hymn to "the Creator; the uſe of the paſſions, which are the organs of "the mind, cannot be barren of praiſe to him, nor unproduc-"tive to ourſelves of that noble and uncommon union of ſci-"ence and admiration, which a contemplation of the works of "infinite Wiſdom alone can afford to a rational mind; whilſt re-"ferring to him whatever we find of right, or good, or fair, in "ourſelves, diſcovering his ſtrength and wiſdom even in our "own weakneſs and imperfection, honouring them where we "diſcover them clearly, and adoring their profundity where we "are loſt in our ſearch, we may be inquiſitive without impertі-"nence, and elevated without pride; we may be admitted, if I "may dare to ſay ſo, into the counſels of the Almighty, by a "conſideration of his works. This elevation of the mind ought "to be the principal end of all our ſtudies, which, if they do "not in ſome meaſure effect, they are of very little ſervice "to us."

ESSAYS

ON THE

INTELLECTUAL POWERS OF MAN.

ESSAY I.

PRELIMINARY.

CHAP. I.

Explication of Words.

THERE is no greater impediment to the advancement of knowledge than the ambiguity of words. To this chiefly it is owing that we find ſects and parties in moſt branches of ſcience; and diſputes, which are carried on from age to age, without being brought to an iſſue.

Sophiſtry has been more effectually excluded from mathematics and natural philoſophy than from other ſciences. In mathematics it had no place from the beginning: Mathematicians having had the wiſdom to define accurately the terms they uſe, and to lay down, as axioms, the firſt principles on which their reaſoning is grounded. Accordingly we find no parties among mathematicians, and hardly any diſputes.

CHAP. I. In natural philoſophy, there was no leſs ſophiſtry, no leſs diſpute and uncertainty, than in other ſciences, until about a century and a half ago, this ſcience began to be built upon the foundation of clear definitions and ſelf-evident axioms. Since that time, the ſcience, as if watered with the dew of Heaven, hath grown apace; diſputes have ceaſed, truth hath prevailed, and the ſcience hath received greater increaſe in two centuries than in two thouſand years before.

It were to be wiſhed, that this method, which hath been ſo ſucceſsful in thoſe branches of ſcience, were attempted in others: For definitions and axioms are the foundations of all ſcience. But that definitions may not be ſought, where no definition can be given, nor logical definitions be attempted, where the ſubject does not admit of them, it may be proper to lay down ſome general principles concerning definition, for the ſake of thoſe who are leſs converſant in this branch of logic.

When one undertakes to explain any art or ſcience, he will have occaſion to uſe many words that are common to all who uſe the ſame language, and ſome that are peculiar to that art or ſcience. Words of the laſt kind are called *terms of the art*, and ought to be diſtinctly explained, that their meaning may be underſtood.

A definition is nothing elſe but an explication of the meaning of a word, by words whoſe meaning is already known. Hence it is evident, that every word cannot be defined; for the definition muſt conſiſt of words; and there could be no definition, if there were not words previouſly underſtood without definition. Common words, therefore, ought to be uſed in their common acceptation; and, when they have different acceptations in common language, theſe, when it is neceſſary, ought to be diſtinguiſhed. But they require no definition. It is ſufficient to define words that are uncommon, or that are uſed in an uncommon meaning.

It may farther be obſerved, that there are many words, which, though they may need explication, cannot be logically defined. A

logical

logical definition, that is, a ſtrict and proper definition, muſt expreſs the kind of the thing defined, and the ſpecific difference, by which the ſpecies defined, is diſtinguiſhed from every other ſpecies belonging to that kind. It is natural to the mind of man to claſs things under various kinds, and again to ſubdivide every kind into its various ſpecies. A ſpecies may often be ſubdivided into ſubordinate ſpecies, and then it is conſidered as a kind.

From what has been ſaid of logical definition, it is evident, that no word can be logically defined which does not denote a ſpecies; becauſe ſuch things only can have a ſpecific difference; and a ſpecific difference is eſſential to a logical definition. On this account there can be no logical definition of individual things, ſuch as London or Paris. Individuals are diſtinguiſhed either by proper names, or by accidental circumſtances of time or place; but they have no ſpecific difference; and therefore, though they may be known by proper names, or may be deſcribed by circumſtances or relations, they cannot be defined. It is no leſs evident, that the moſt general words cannot be logically defined, becauſe there is not a more general term, of which they are a ſpecies.

Nay, we cannot define every ſpecies of things, becauſe it happens ſometimes that we have not words to expreſs the ſpecific difference. Thus a ſcarlet colour is, no doubt, a ſpecies of colour; but how ſhall we expreſs the ſpecific difference by which ſcarlet is diſtinguiſhed from green or blue? The difference of them is immediately perceived by the eye; but we have not words to expreſs it. Theſe things we are taught by logic.

Without having recourſe to the principles of logic, we may eaſily be ſatisfied that words cannot be defined, which ſignify things perfectly ſimple, and void of all compoſition. This obſervation, I think, was firſt made by DES CARTES, and afterwards more fully illuſtrated by LOCKE. And however obvious it appears to be, many inſtances may be given of great philoſophers who have perplexed

CHAP. I.

plexed and darkened the ſubjects they have treated, by not knowing, or not attending to it.

When men attempt to define things which cannot be defined, their definitions will always be either obſcure or falſe. It was one of the capital defects of ARISTOTLE's philoſophy, that he pretended to define the ſimpleſt things, which neither can be, nor need to be defined; ſuch as *time* and *motion*. Among modern philoſophers, I know none that has abuſed definition ſo much as CAROLUS WOLFIUS, the famous German philoſopher, who, in a work on the human mind, called *Pſychologia Empirica*, conſiſting of many hundred propoſitions, fortified by demonſtrations, with a proportional accompanyment of definitions, corollaries, and ſcholia, has given ſo many definitions of things, which cannot be defined, and ſo many demonſtrations of things ſelf-evident, that the greateſt part of the work conſiſts of tautology, and ringing changes upon words.

There is no ſubject in which there is more frequent occaſion to uſe words that cannot be logically defined, than in treating of the powers and operations of the mind. The ſimpleſt operations of our minds muſt all be expreſſed by words of this kind. No man can explain by a logical definition what it is to think, to apprehend, to believe, to will, to deſire. Every man who underſtands the language has ſome notion of the meaning of thoſe words; and every man, who is capable of reflection, may, by attending to the operations of his own mind, which are ſignified by them, form a clear and diſtinct notion of them; but they cannot be logically defined.

Since therefore it is often impoſſible to define words which we muſt uſe on this ſubject, we muſt as much as poſſible uſe common words, in their common acceptation, pointing out their various ſenſes where they are ambiguous; and when we are obliged to uſe words leſs common, we muſt endeavour to explain them

as

as well as we can, without affecting to give logical definitions, when the nature of the thing does not allow it. CHAP. I.

The following obſervations on the meaning of certain words are intended to ſupply, as far as we can, the want of definitions, by preventing ambiguity or obſcurity in the uſe of them.

1. By the *mind* of a man, we underſtand that in him which thinks, remembers, reaſons, wills. The eſſence both of body and of mind is unknown to us. We know certain properties of the firſt, and certain operations of the laſt, and by theſe only we can define or deſcribe them. We define body to be that which is extended, ſolid, moveable, diviſible. In like manner, we define mind to be that which thinks. We are conſcious that we think, and that we have a variety of thoughts of different kinds; ſuch as ſeeing, hearing, remembering, deliberating, reſolving, loving, hating, and many other kinds of thought, all which we are taught by nature to attribute to one internal principle; and this principle of thought we call the *mind* or *ſoul* of a man.

2. By the *operations* of the mind, we underſtand every mode of thinking of which we are conſcious.

It deſerves our notice, that the various modes of thinking have always, and in all languages, as far as we know, been called by the name of Operations of the mind, or by names of the ſame import. To body we aſcribe various properties, but not operations, properly ſo called; it is extended, diviſible, moveable, inert; it continues in any ſtate in which it is put; every change of its ſtate is the effect of ſome force impreſſed upon it, and is exactly proportional to the force impreſſed, and in the preciſe direction of that force. Theſe are the general properties of matter, and theſe are not operations; on the contrary, they all imply its being a dead inactive thing, which moves only as it is moved, and acts only by being acted upon.

But

CHAP. I.

But the mind is from its very nature a living and active being. Every thing we know of it implies life and active energy; and the reaſon why all its modes of thinking are called its operations, is, that in all, or in moſt of them, it is not merely paſſive as body is, but is really and properly active.

In all ages, and in all languages, ancient and modern, the various modes of thinking have been expreſſed by words of active ſignification, ſuch as ſeeing, hearing, reaſoning, willing, and the like. It ſeems therefore to be the natural judgment of mankind, that the mind is active in its various ways of thinking; and for this reaſon they are called its operations, and are expreſſed by active verbs.

It may be made a queſtion, What regard is to be paid to this natural judgment? may it not be a vulgar error? Philoſophers who think ſo, have, no doubt, a right to be heard. But until it is proved that the mind is not active in thinking, but merely paſſive, the common language with regard to its operations ought to be uſed, and ought not to give place to a phraſeology invented by Philoſophers, which implies its being merely paſſive.

3. The words *power* and *faculty*, which are often uſed in ſpeaking of the mind, need little explication. Every operation ſuppoſes a power in the being that operates; for to ſuppoſe any thing to operate, which has no power to operate, is manifeſtly abſurd. But, on the other hand, there is no abſurdity in ſuppoſing a being to have power to operate, when it does not operate. Thus I may have power to walk, when I ſit; or to ſpeak, when I am ſilent. Every operation therefore implies power; but the power does not imply the operation.

The *faculties* of the mind, and its *powers*, are often uſed as ſynonimous expreſſions. But as moſt ſynonimes have ſome minute diſtinction that deſerves notice, I apprehend that the word *faculty*

culty is moſt properly applied to thoſe powers of the mind which are original and natural, and which make a part of the conſtitution of the mind. There are other powers which are acquired by uſe, exerciſe or ſtudy, which are not called faculties, but *habits*. There muſt be ſomething in the conſtitution of the mind neceſſary to our being able to acquire habits, and this is commonly called *capacity*. CHAP. I.

4. We frequently meet with a diſtinction in writers upon this ſubject, between things *in the mind*, and things *external* to the mind. The powers, faculties, and operations of the mind, are things in the mind. Every thing is ſaid to be in the mind, of which the mind is the *ſubject*. It is ſelf-evident, that there are ſome things which cannot exiſt without a ſubject to which they belong, and of which they are attributes. Thus colour muſt be in ſomething coloured; figure in ſomething figured; thought can only be in ſomething that thinks; wiſdom and virtue cannot exiſt but in ſome being that is wiſe and virtuous. When therefore we ſpeak of things in the mind, we underſtand by this, things of which the mind is the ſubject. Excepting the mind itſelf, and things in the mind, all other things are ſaid to be external. It ought therefore to be remembered, that this diſtinction between things in the mind, and things external, is not meant to ſignify the place of the things we ſpeak of, but their ſubject.

There is a figurative ſenſe in which things are ſaid to be in the mind, which it is ſufficient barely to mention. We ſay ſuch a thing was not in my mind, meaning no more than that I had not the leaſt thought of it. By a figure, we put the thing for the thought of it. In this ſenſe external things, are in the mind as often as they are the objects of our thought.

5. *Thinking* is a very general word, which includes all the operations of our minds, and is ſo well underſtood as to need no definition.

To

CHAP. I. To *perceive*, to *remember*, to be *conſcious*, and to *conceive* or *imagine*, are words common to Philoſophers, and to the vulgar. They ſignify different operations of the mind, which are diſtinguiſhed in all languages, and by all men that think. I ſhall endeavour to uſe them in their moſt common and proper acceptation, and I think they are hardly capable of ſtrict definition. But as ſome Philoſophers, in treating of the mind, have taken the liberty to uſe them very improperly, ſo as to corrupt the Engliſh language, and to confound things, which the common underſtanding of mankind hath always led them to diſtinguiſh, I ſhall make ſome obſervations on the meaning of them, that may prevent ambiguity or confuſion in the uſe of them.

6. *Firſt*, We are never ſaid to *perceive* things, of the exiſtence of which we have not a full conviction. I may *conceive* or *imagine* a mountain of gold, or a winged horſe; but no man ſays that he perceives ſuch a creature of imagination. Thus *perception* is diſtinguiſhed from *conception* or imagination. *Secondly*, Perception is applied only to external objects, not to thoſe that are in the mind itſelf. When I am pained, I do not ſay that I perceive pain, but that I feel it, or that I am conſcious of it. Thus *perception* is diſtinguiſhed from *conſciouſneſs*. *Thirdly*, The immediate object of perception muſt be ſomething preſent, and not what is paſt. We may remember what is paſt, but do not perceive it. I may ſay, I perceive ſuch a perſon has had the ſmall-pox; but this phraſe is figurative, although the figure is ſo familiar that it is not obſerved. The meaning of it is, that I perceive the pits in his face, which are certain ſigns of his having had the ſmall-pox. We ſay we perceive the thing ſignified, when we only perceive the ſign. But when the word *perception* is uſed properly, and without any figure, it is never applied to things paſt. And thus it is diſtinguiſhed from *remembrance*.

In a word, perception is moſt properly applied to the evidence which we have of external objects by our ſenſes. But as this is a very

very clear and cogent kind of evidence, the word is often applied by analogy to the evidence of reaſon or of teſtimony, when it is clear and cogent. The perception of external objects by our ſenſes, is an operation of the mind of a peculiar nature, and ought to have a name appropriated to it. It has ſo in all languages. And, in Engliſh, I know no word more proper to expreſs this act of the mind than perception. Seeing, hearing, ſmelling, taſting, and touching or feeling, are words that expreſs the operations proper to each ſenſe; perceiving expreſſes that which is common to them all.

The obſervations made on this word would have been unneceſſary, if it had not been ſo much abuſed in philoſophical writings upon the mind; for in other writings, it has no obſcurity. Although this abuſe is not chargeable on Mr HUME only, yet I think he has carried it to the higheſt pitch. The firſt ſentence of his Treatiſe of human nature runs thus: "All the perceptions of the "human mind reſolve themſelves into two diſtinct heads, which "I ſhall call impreſſions and ideas." He adds a little after, that, under the name of impreſſions, he comprehends all our ſenſations, paſſions, and emotions. Here we learn, that our paſſions and emotions are perceptions. I believe, no Engliſh writer before him ever gave the name of a perception to any paſſion or emotion. When a man is angry, we muſt ſay that he has the perception of anger. When he is in love, that he has the perception of love. He ſpeaks often of the perceptions of memory, and of the perceptions of imagination; and he might as well ſpeak of the hearing of ſight, or of the ſmelling of touch: For, ſurely, hearing is not more different from ſight, or ſmelling from touch, than perceiving is from remembering or imagining.

7. *Conſciouſneſs* is a word uſed by Philoſophers, to ſignify that immediate knowledge which we have of our preſent thoughts and purpoſes, and, in general, of all the preſent operations of our minds. Whence we may obſerve, that conſciouſneſs is only of things preſent. To apply conſciouſneſs to things paſt, which ſome-

CHAP. I. times is done in popular diſcourſe, is to confound conſciouſneſs with memory; and all ſuch confuſion of words ought to be avoided in philoſophical diſcourſe. It is likewiſe to be obſerved, that conſciouſneſs is only of things in the mind, and not of external things. It is improper to ſay I am conſcious of the table which is before me. I perceive it, I ſee it, but do not ſay I am conſcious of it. As that conſciouſneſs by which we have a knowledge of the operations of our own minds, is a different power from that by which we perceive external objects, and as theſe different powers have different names in our language, and, I believe, in all languages, a Philoſopher ought carefully to preſerve this diſtinction, and never to confound things ſo different in their nature.

8. *Conceiving*, *imagining*, and *apprehending*, are commonly uſed as ſynonymous in our language, and ſignify the ſame thing which the Logicians call ſimple apprehenſion. This is an operation of the mind different from all thoſe we have mentioned. Whatever we perceive, whatever we remember, whatever we are conſcious of, we have a full perſuaſion or conviction of its exiſtence. But we may conceive or imagine what has no exiſtence, and what we firmly believe to have no exiſtence. What never had an exiſtence cannot be remembered; what has no exiſtence *at preſent* cannot be the object of perception or of conſciouſneſs; but what never had, nor has any exiſtence, may be conceived. Every man knows that it is as eaſy to conceive a winged horſe or a centaur, as it is to conceive a horſe or a man. Let it be obſerved therefore, that to *conceive*, to *imagine*, to *apprehend*, when taken in the proper ſenſe, ſignify an act of the mind which implies no belief or judgment at all. It is an act of the mind by which nothing is affirmed or denied, and which therefore can neither be true nor falſe.

But there is another and a very different meaning of thoſe words, ſo common and ſo well authoriſed in language, that it cannot eaſily be avoided; and on that account we ought to be the more on our guard, that we be not miſled by the ambiguity. Politeneſs and good-

good-breeding lead men, on moſt occaſions, to expreſs their opinions with modeſty, eſpecially when they differ from others whom they ought to reſpect. Therefore, when we would expreſs our opinion modeſtly, inſtead of ſaying, "This is my opinion," or, "this is "my judgment," which has the air of dogmaticalneſs, we ſay, "I "conceive it to be thus, I imagine or apprehend it to be thus;" which is underſtood as a modeſt declaration of our judgment. In like manner, when any thing is ſaid which we take to be impoſſible, we ſay, "We cannot conceive it," meaning, that we cannot believe it.

Thus we ſee that the words *conceive*, *imagine*, *apprehend*, have two meanings, and are uſed to expreſs two operations of the mind, which ought never to be confounded. Sometimes they expreſs ſimple apprehenſion, which implies no judgment at all; ſometimes they expreſs judgment or opinion. This ambiguity ought to be attended to, that we may not impoſe upon ourſelves or others in the uſe of them. The ambiguity is indeed remedied in a great meaſure by their conſtruction. When they are uſed to expreſs ſimple apprehenſion, they are followed by a noun in the *accuſative caſe*, which ſignifies the object conceived. But when they are uſed to expreſs opinion or judgment, they are commonly followed by a verb in the *infinitive mood*. "I conceive an Egyptian pyramid." This implies no judgment. "I conceive the Egyptian pyramids to "be the moſt ancient monuments of human art." This implies judgment. When the words are uſed in the laſt ſenſe, the thing conceived muſt be a propoſition, becauſe judgment cannot be expreſſed but by a propoſition. When they are uſed in the firſt ſenſe, the thing conceived may be no propoſition, but a ſimple term only, as a pyramid, an obeliſk. Yet it may be obſerved, that even a propoſition may be ſimply apprehended without forming any judgment of its truth or falſehood: For it is one thing to conceive the meaning of a propoſition; it is another thing to judge it to be true or falſe.

CHAP. I. Although the diſtinction between ſimple apprehenſion and every degree of aſſent or judgment, be perfectly evident to every man who reflects attentively on what paſſes in his own mind; although it is very neceſſary, in treating of the powers of the mind, to attend carefully to this diſtinction; yet, in the affairs of common life, it is ſeldom neceſſary to obſerve it accurately. On this account we ſhall find, in all common languages, the words which expreſs one of thoſe operations frequently applied to the other. To think, to ſuppoſe, to imagine, to conceive, to apprehend, are the words we uſe to expreſs ſimple apprehenſion; but they are all frequently uſed to expreſs judgment. Their ambiguity ſeldom occaſions any inconvenience in the common affairs of life, for which language is framed. But it has perplexed Philoſophers, in treating of the operations of the mind, and will always perplex them, if they do not attend accurately to the different meanings which are put upon thoſe words on different occaſions.

9. Moſt of the operations of the mind, from their very nature, muſt have objects to which they are directed, and about which they are employed. He that perceives, muſt perceive ſomething; and that which he perceives is called the object of his perception. To perceive, without having any object of perception, is impoſſible. The mind that perceives, the object perceived, and the *operation* of perceiving that object, are diſtinct things, and are diſtinguiſhed in the ſtructure of all languages. In this ſentence, "I ſee, or perceive "the moon;" *I* is the perſon or *mind*; the active verb *ſee* denotes the operation of that mind; and the *moon* denotes the object. What we have ſaid of perceiving, is equally applicable to moſt operations of the mind. Such operations are, in all languages, expreſſed by active tranſitive verbs: And we know, that, in all languages, ſuch verbs require a thing or perſon, which is the agent, and a noun following in an oblique caſe, which is the object. Whence it is evident, that all mankind, both thoſe who have contrived language, and thoſe who uſe it with underſtanding, have diſtinguiſhed theſe three things as different, to wit, the operations of the mind, which

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are expreſſed by active verbs, the mind itſelf, which is the nomina- CHAP. I.
tive to thoſe verbs, and the object, which is, in the oblique caſe, governed by them.

It would have been unneceſſary to explain ſo obvious a diſtinction, if ſome ſyſtems of philoſophy had not confounded it. Mr HUME's ſyſtem, in particular, confounds all diſtinction between the operations of the mind and their objects. When he ſpeaks of the ideas of memory, the ideas of imagination, and the ideas of ſenſe, it is often impoſſible, from the tenor of his diſcourſe, to know whether, by thoſe ideas, he means the operations of the mind, or the objects about which they are employed. And indeed, according to his ſyſtem, there is no diſtinction between the one and the other.

A Philoſopher is, no doubt, entitled to examine even thoſe diſtinctions that are to be found in the ſtructure of all languages; and, if he is able to ſhew that there is no foundation for them in the nature of the things diſtinguiſhed; if he can point out ſome prejudice common to mankind which has led them to diſtinguiſh things that are not really different; in that caſe, ſuch a diſtinction may be imputed to a vulgar error, which ought to be corrected in philoſophy. But when, in his firſt ſetting out, he takes it for granted, without proof, that diſtinctions found in the ſtructure of all languages, have no foundation in nature; this ſurely is too faſtidious a way of treating the common ſenſe of mankind. When we come to be inſtructed by Philoſophers, we muſt bring the old light of common ſenſe along with us, and by it judge of the new light which the Philoſopher communicates to us. But when we are required to put out the old light altogether, that we may follow the new, we have reaſon to be on our guard. There may be diſtinctions that have a real foundation, and which may be neceſſary in philoſophy, which are not made in common language, becauſe not neceſſary in the common buſineſs of life. But I believe

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CHAP. I. no inſtance will be found of a diſtinction made in all languages, which has not a juſt foundation in nature.

10. The word *idea* occurs ſo frequently in modern philoſophical writings upon the mind, and is ſo ambiguous in its meaning, that it is neceſſary to make ſome obſervations upon it. There are chiefly two meanings of this word in modern authors, a popular and a philoſophical.

Firſt, In popular language, *idea* ſignifies the ſame thing as conception, apprehenſion, notion. To have an idea of any thing, is to conceive it. To have a diſtinct idea, is to conceive it diſtinctly. To have no idea of it, is not to conceive it at all. It was before obſerved, that conceiving or apprehending has always been conſidered by all men as an act or operation of the mind, and on that account has been expreſſed in all languages by an active verb. When, therefore, we uſe the phraſe of having ideas, in the popular ſenſe, we ought to attend to this, that it ſignifies preciſely the ſame thing which we commonly expreſs by the active verbs conceiving or apprehending.

When the word idea is taken in this popular ſenſe, no man can poſſibly doubt whether he has ideas. For he that doubts muſt think, and to think is to have ideas.

Sometimes, in popular language, a man's ideas ſignify his opinions. The ideas of ARISTOTLE, or of EPICURUS, ſignify the opinions of theſe Philoſophers. What was formerly ſaid of the words *imagine*, *conceive*, *apprehend*, that they are ſometimes uſed to expreſs judgment, is no leſs true of the word idea. This ſignification of the word ſeems indeed more common in the French language than in Engliſh. But it is found in this ſenſe in good Engliſh authors, and even in Mr LOCKE. Thus we ſee, that having *ideas*, taken in the popular ſenſe, has preciſely the ſame meaning with conceiving, imagining, apprehending, and has likewiſe

wiſe the ſame ambiguity. It may, therefore, be doubted, whether the introduction of this word into popular diſcourſe, to ſignify the operation of conceiving or apprehending, was at all neceſſary. For, *firſt*, We have, as has been ſhown, ſeveral words which are either originally Engliſh, or have been long naturalized, that expreſs the ſame thing; why therefore ſhould we adopt a Greek word in place of theſe, any more than a French or a German word? Beſides, the words of our own language are leſs ambiguous. For the word idea has, for many ages, been uſed by Philoſophers as a term of art; and in the different ſyſtems of Philoſophers means very different things. CHAP. I.

Secondly, According to the philoſophical meaning of the word idea, it does not ſignify that act of the mind which we call thought or conception, but ſome object of thought. Ideas, according to Mr Locke, (whoſe very frequent uſe of this word has probably been the occaſion of its being adopted into common language), "are nothing but the immediate objects of the mind in thinking." But of thoſe objects of thought called Ideas, different ſects of Philoſophers have given a very different account. BRUCKERUS, a learned German, wrote a whole book giving the hiſtory of ideas.

The moſt ancient ſyſtem we have concerning ideas, is that which is explained in ſeveral dialogues of PLATO, and which many ancient, as well as modern writers, have aſcribed to PLATO as the inventor. But it is certain that PLATO had his doctrine upon this ſubject, as well as the name *idea*, from the ſchool of PYTHAGORAS. We have ſtill extant a tract of TIMÆUS the Locrian, a Pythagorean Philoſopher, concerning the ſoul of the world, in which we find the ſubſtance of PLATO's doctrine concerning ideas. They were held to be eternal, uncreated, and immutable forms or models, according to which the Deity made every ſpecies of things that exiſts, of an eternal matter. Thoſe Philoſophers held, that there are three firſt principles of all things. *Firſt*, An eternal matter, of which all things were made. *Secondly*, Eternal and immaterial forms or ideas, according to which they were made; and, *thirdly*,

CHAP. I. *thirdly*, An efficient cauſe, the Deity, who made them. The mind of man, in order to its being fitted for the contemplation of theſe eternal ideas, muſt undergo a certain purification, and be weaned from ſenſible things. The eternal ideas are the only object of ſcience; becauſe, the objects of ſenſe being in a perpetual flux, there can be no real knowledge with regard to them.

The Philoſophers of the Alexandrian ſchool, commonly called *the latter Platoniſts*, made ſome change upon the ſyſtem of the ancient Platoniſts with reſpect to the eternal ideas. They held them not to be a principle diſtinct from the Deity, but to be the conceptions of things in the divine underſtanding, the natures and eſſences of all things being perfectly known to him from eternity.

It ought to be obſerved, that the Pythagoreans and the Platoniſts, whether elder or latter, made the eternal ideas to be objects of ſcience only, and of abſtract contemplation, not the objects of ſenſe. And in this the ancient ſyſtem of eternal ideas differs from the modern one of Father MALEBRANCHE. He held in common with other modern Philoſophers, that no external thing is perceived by us immediately, but only by ideas: But he thought, that the ideas, by which we perceive an external world, are the ideas of the Deity himſelf, in whoſe mind the ideas of all things paſt, preſent, and future, muſt have been from eternity; for the Deity being intimately preſent to our minds at all times, may diſcover to us as much of his ideas as he ſees proper, according to certain eſtabliſhed laws of nature: And in his ideas, as in a mirror, we perceive whatever we do perceive of the external world.

Thus we have three ſyſtems, which maintain, that the ideas, which are the immediate objects of human knowledge, are eternal and immutable, and exiſted before the things which they repreſent. There are other ſyſtems, according to which, the ideas, which are the immediate objects of all our thoughts, are poſterior to the things which they repreſent, and derived from them. We ſhall give

give ſome account of theſe; but as they have gradually ſprung out of the ancient Peripatetic ſyſtem, it is neceſſary to begin with ſome account of it.

ARISTOTLE taught, that all the objects of our thought enter at firſt by the ſenſes; and, ſince the ſenſe cannot receive external material objects themſelves, it receives their ſpecies; that is, their images or forms, without the matter; as wax receives the form of the ſeal without any of the matter of it. Theſe images or forms, impreſſed upon the ſenſes, are called *ſenſible ſpecies*, and are the objects only of the ſenſitive part of the mind: But, by various internal powers, they are retained, refined, and ſpiritualized, ſo as to become objects of memory and imagination, and, at laſt, of pure intellection. When they are objects of memory and of imagination, they get the name of *phantaſms*. When, by farther refinement, and being ſtripped of their particularities, they become objects of ſcience; they are called *intelligible ſpecies*: So that every immediate object, whether of ſenſe, of memory, of imagination, or of reaſoning, muſt be ſome phantaſm or ſpecies in the mind itſelf.

The followers of ARISTOTLE, eſpecially the ſchoolmen, made great additions to this theory, which the Author himſelf mentions very briefly, and with an appearance of reſerve. They entered into large diſquiſitions with regard to the ſenſible ſpecies, what kind of things they are; how they are ſent forth by the object, and enter by the organs of the ſenſes; how they are preſerved and refined by various agents, called internal ſenſes; concerning the number and offices of which they had many controverſies. But we ſhall not enter into a detail of theſe matters.

The reaſon of giving this brief account of the theory of the Peripatetics, with regard to the immediate objects of our thoughts, is, becauſe the doctrine of modern Philoſophers concerning ideas is built upon it. Mr LOCKE, who uſes this word ſo very frequently, tells us, that he means the ſame thing by it, as is commonly

CHAP. I. meant by *ſpecies* or *phantaſm*. GASSENDI, from whom LOCKE borrowed more than from any other author, ſays the ſame. The words *ſpecies* and *phantaſm*, are terms of art in the Peripatetic ſyſtem, and the meaning of them is to be learned from it.

The theory of DEMOCRITUS and EPICURUS, on this ſubject, was not very unlike to that of the Peripatetics. They held, that all bodies continually ſend forth ſlender films or ſpectres from their ſurface, of ſuch extreme ſubtilty, that they eaſily penetrate our groſs bodies, or enter by the organs of ſenſe, and ſtamp their image upon the mind. The ſenſible ſpecies of ARISTOTLE were mere forms without matter. The ſpectres of EPICURUS were compoſed of a very ſubtile matter.

Modern Philoſophers, as well as the Peripatetics and Epicureans of old, have conceived, that external objects cannot be the immediate objects of our thought; that there muſt be ſome image of them in the mind itſelf, in which, as in a mirror, they are ſeen. And the name *idea*, in the philoſophical ſenſe of it, is given to thoſe internal and immediate objects of our thoughts. The external thing is the remote or mediate object; but the idea, or image of that object in the mind, is the immediate object, without which we could have no perception, no remembrance, no conception of the mediate object.

When, therefore, in common language, we ſpeak of having an idea of any thing, we mean no more by that expreſſion, but thinking of it. The vulgar allow, that this expreſſion implies a mind that thinks; an act of that mind which we call thinking, and an object about which we think. But, beſides theſe three, the Philoſopher conceives that there is a fourth, to wit, the *idea*, which is the immediate object. The idea is in the mind itſelf, and can have no exiſtence but in a mind that thinks; but the remote or mediate object may be ſomething external, as the ſun or moon; it may be ſomething paſt or future; it may be ſomething which never exiſted.

This

This is the philoſophical meaning of the word *idea*; and we may obſerve, that this meaning of that word is built upon a philoſophical opinion: For, if Philoſophers had not believed that there are ſuch immediate objects of all our thoughts in the mind, they would never have uſed the word idea to expreſs them.

I ſhall only add on this article, that, although I may have occaſion to uſe the word idea in this philoſophical ſenſe in explaining the opinions of others, I ſhall have no occaſion to uſe it in expreſſing my own, becauſe I believe *ideas*, taken in this ſenſe, to be a mere fiction of Philoſophers. And, in the popular meaning of the word, there is the leſs occaſion to uſe it, becauſe the Engliſh words *thought*, *notion*, *apprehenſion*, anſwer the purpoſe as well as the Greek word *idea*; with this advantage, that they are leſs ambiguous. There is, indeed, a meaning of the word idea, which I think moſt agreeable to its uſe in ancient philoſophy, and which I would willingly adopt, if uſe, the arbiter of language, did permit. But this will come to be explained afterwards.

11. The word *impreſſion* is uſed by Mr HUME, in ſpeaking of the operations of the mind, almoſt as often as the word *idea* is by Mr LOCKE. What the latter calls ideas, the former divides into two claſſes; one of which he calls impreſſions, the other ideas. I ſhall make ſome obſervations upon Mr HUME's explication of *that* word, and then conſider the proper meaning of it in the Engliſh language.

"We may divide, (ſays Mr HUME, Eſſays, vol. 2. page 18.), all "the perceptions of the human mind into two claſſes or ſpecies, "which are diſtinguiſhed by their different degrees of force and "vivacity. The leſs lively and forcible are commonly denomina-"ted thoughts or ideas. The other ſpecies want a name in our "language, and in moſt others; let us therefore uſe a little free-"dom, and call them impreſſions. By the term *impreſſions*, "then, I mean all our more lively perceptions, when we hear, or "ſee, or feel, or love, or hate, or deſire, or will. Ideas are the

"leſs lively perceptions, of which we are conſcious, when we re-
"flect on any of thoſe ſenſations or movements above men-
"tioned."

This is the explication Mr HUME hath given in his Eſſays of the term *impreſſions*, when applied to the mind; and his explication of it, in his Treatiſe of human nature, is to the ſame purpoſe.

Diſputes about words belong rather to Grammarians than to Philoſophers; but Philoſophers ought not to eſcape cenſure when they corrupt a language, by uſing words in a way which the purity of the language will not admit. I find fault with Mr HUME's phraſeology in the words I have quoted,

Firſt, Becauſe he gives the name of perceptions to every operation of the mind. Love is a perception, hatred a perception. Deſire is a perception, will is a perception; and, by the ſame rule, a doubt, a queſtion, a command, is a perception. This is an intolerable abuſe of language, which no Philoſopher has authority to introduce.

Secondly, When Mr HUME ſays, *that we may divide all the perceptions of the human mind into two claſſes or ſpecies, which are diſtinguiſhed by their degrees of force and vivacity*, the manner of expreſſion is looſe and unphiloſophical. To differ in ſpecies is one thing; to differ in degree is another. Things which differ in degree only muſt be of the ſame ſpecies. It is a maxim of common ſenſe, admitted by all men, that *greater* and *leſs* do not make a change of ſpecies. The ſame man may differ in the degree of his force and vivacity, in the morning and at night; in health and in ſickneſs: But this is ſo far from making him a different ſpecies, that it does not ſo much as make him a different individual. To ſay, therefore, that two different claſſes, or ſpecies of perceptions, are diſtinguiſhed by the degrees of their force and vivacity, is to confound a difference of *degree* with a difference of *ſpecies*, which every man of underſtanding knows how to diſtinguiſh.

Thirdly,

Thirdly, We may obſerve, that this Author, having given the general name of perception to all the operations of the mind, and diſtinguiſhed them into two claſſes or ſpecies, which differ only in degree of force and vivacity, tells us, that he gives the name of impreſſions to all our more lively perceptions; to wit, when we hear, or ſee, or feel, or love, or hate, or deſire, or will. There is great confuſion in this account of the meaning of the word *impreſſion*. When I ſee, this is an *impreſſion*. But why has not the Author told us, whether he gives the name of *impreſſion* to the object ſeen, or to that act of my mind by which I ſee it? When I ſee the full moon, the full moon is one thing, my perceiving it is another thing. Which of theſe two things does he call an impreſſion? We are left to gueſs this; nor does all that this Author writes about impreſſions clear this point. Every thing he ſays tends to darken it, and to lead us to think, that the full moon which I ſee, and my ſeeing it, are not two things, but one and the ſame thing.

The ſame obſervation may be applied to every other inſtance the Author gives to illuſtrate the meaning of the word *impreſſion*. "When we hear, when we feel, when we love, when we hate, "when we deſire, when we will." In all theſe acts of the mind there muſt be an *object*, which is heard, or felt, or loved, or hated, or deſired, or willed. Thus, for inſtance, I love my country. This, ſays Mr HUME, is an *impreſſion*. But what is the *impreſſion*? Is it my country, or is it the affection I bear to it? I aſk the Philoſopher this queſtion; but I find no anſwer to it. And when I read all that he has *written* on this ſubject, I find this word *impreſſion* ſometimes uſed to ſignify an operation of the mind, ſometimes the object of the operation; but, for the moſt part, it is a vague and indetermined word that ſignifies both.

I know not whether it may be conſidered as an apology for ſuch abuſe of words, in an Author who underſtood the language ſo well, and uſed it with ſo great propriety in writing on other ſubjects

CHAP. I. jects, that Mr HUME's ſyſtem, with regard to the mind, required a language of a different ſtructure from the common; or, if expreſſed in plain Engliſh, would have been too ſhocking to the common ſenſe of mankind. To give an inſtance or two of this. If a man receives a preſent on which he puts a high value; if he ſee and handle it, and put it in his pocket, this, ſays Mr HUME, is an *impreſſion*. If the man only dream that he received ſuch a preſent, this is an *idea*. Wherein lies the difference between this impreſſion and this idea; between the dream and the reality? They are different claſſes or ſpecies ſays Mr HUME: ſo far all men will agree with him. But he adds, that they are diſtinguiſhed only by different degrees of force and vivacity. Here he inſinuates a tenet of his own, in contradiction to the common ſenſe of mankind. Common ſenſe convinces every man, that a lively dream is no nearer to a reality than a faint one; and that if a man ſhould dream that he had all the wealth of Crœſus, it would not put one farthing in his pocket. It is impoſſible to fabricate arguments againſt ſuch undeniable principles, without confounding the meaning of words.

In like manner, if a man would perſuade me that the moon which I ſee, and my ſeeing it, are not two things, but one and the ſame thing, he will anſwer his purpoſe leſs by arguing this point in plain Engliſh, than by confounding the two under one name, ſuch as that of an *impreſſion*: For ſuch is the power of words, that if we can be brought to the habit of calling two things that are connected, *by the ſame name*, we are the more eaſily led to believe them to be one and the ſame thing.

Let us next conſider the proper meaning of the word *impreſſion* in Engliſh, that we may ſee how far it is fit to expreſs either the operations of the mind, or their objects.

When a figure is ſtamped upon a body by preſſure, that figure is called an *impreſſion*, as the impreſſion of a ſeal on wax, of printing-

printing-types, or of a copperplate, on paper. This ſeems now to be the literal ſenſe of the word; the effect borrowing its name from the cauſe. But by metaphor or analogy, like moſt other words, its meaning is extended, ſo as to ſignify any change produced in a body by the operation of ſome external cauſe. A blow of the hand makes no impreſſion on a ſtone-wall; but a battery of cannon may. The moon raiſes a tide in the ocean, but makes no impreſſion on rivers and lakes. CHAP. I.

When we ſpeak of making an impreſſion on the mind, the word is carried ſtill farther from its literal meaning; uſe, however, which is the arbiter of language, authoriſes this application of it. As when we ſay that admonition and reproof make little impreſſion on thoſe who are confirmed in bad habits. The ſame diſcourſe delivered in one way, makes a ſtrong impreſſion on the hearers; delivered in another way, it makes no impreſſion at all.

It may be obſerved, that, in ſuch examples, an impreſſion made on the mind always implies ſome change of purpoſe or will; ſome new habit produced, or ſome former habit weakened; ſome paſſion raiſed or allayed. When ſuch changes are produced by perſuaſion, example, or any external cauſe, we ſay that ſuch cauſes make an impreſſion upon the mind. But when things are ſeen or heard, or apprehended, without producing any paſſion or emotion, we ſay that they make no impreſſion.

In the moſt extenſive ſenſe, an impreſſion is a change produced in ſome paſſive ſubject by the operation of an external cauſe. If we ſuppoſe an active being to produce any change in itſelf by its own active power, this is never called an impreſſion. It is the act or operation of the being itſelf, not an impreſſion upon it. From this it appears, that to give the name of an impreſſion to any effect produced in the mind, is to ſuppoſe that the mind does not act at all in the production of that effect. If ſeeing, hearing, deſiring, willing, be operations of the mind, they cannot be impreſſions. If they

CHAP. V. they be impreſſions, they cannot be operations of the mind. In the ſtructure of all languages, they are conſidered as acts or operations of the mind itſelf, and the names given them imply this. To call them impreſſions, therefore, is to treſpaſs againſt the ſtructure, not of a particular language only, but of all languages.

If the word *impreſſion* be an improper word to ſignify the operations of the mind, it is at leaſt as improper to ſignify their objects; for would any man be thought to ſpeak with propriety, who ſhould ſay that the ſun is an impreſſion, that the earth and the ſea are impreſſions?

It is commonly believed, and taken for granted, that every language, if it be ſufficiently copious in words, is equally fit to expreſs all opinions, whether they be true or falſe. I apprehend, however, that there is an exception to this general rule, which deſerves our notice. There are certain common opinions of mankind, upon which the ſtructure and grammar of all languages are founded. While theſe opinions are common to all men, there will be a great ſimilarity in all languages that are to be found on the face of the earth. Such a ſimilarity there really is; for we find in all languages the ſame parts of ſpeech, the diſtinction of nouns and verbs, the diſtinction of nouns into adjective and ſubſtantive, of verbs into active and paſſive. In verbs we find like tenſes, moods, perſons and numbers. There are general rules of grammar, the ſame in all languages. This ſimilarity of ſtructure in all languages ſhews an uniformity among men in thoſe opinions upon which the ſtructure of language is founded.

If, for inſtance, we ſhould ſuppoſe that there was a nation who believed that the things which we call attributes might exiſt without a ſubject, there would be in their language no diſtinction between adjectives and ſubſtantives, nor would it be a rule with them that an adjective has no meaning, unleſs when joined to a ſubſtantive. If there was any nation who did not diſtinguiſh between acting

acting and being acted upon, there would in their language be no distinction between active and passive verbs, nor would it be a rule that the active verb must have an agent in the nominative case; but that, in the passive verb, the agent must be in an oblique case. CHAP. I.

The structure of all languages is grounded upon common notions, which Mr HUME's philosophy opposes, and endeavours to overturn. This no doubt led him to warp the common language into a conformity with his principles; but we ought not to imitate him in this, until we are satisfied that his principles are built on a solid foundation.

12. Sensation is a name given by Philosophers to an act of mind, which may be distinguished from all others by this, that it hath no object distinct from the act itself. Pain of every kind is an uneasy sensation. When I am pained, I cannot say that the pain I feel is one thing, and that my feeling it, is another thing. They are one and the same thing, and cannot be disjoined, even in imagination. Pain, when it is not felt, has no existence. It can be neither greater nor less in degree or duration, nor any thing else in kind, than it is felt to be. It cannot exist by itself, nor in any subject, but in a sentient being. No quality of an inanimate insentient being can have the least resemblance to it.

What we have said of pain may be applied to every other sensation. Some of them are agreeable, others uneasy, in various degrees. These being objects of desire or aversion, have some attention given to them; but many are indifferent, and so little attended to, that they have no name in any language.

Most operations of the mind, that have names in common language, are complex in their nature, and made up of various ingredients, or more simple acts; which, though conjoined in our constitution, must be disjoined by abstraction, in order to our having a distinct and scientific notion of the complex operation.

CHAP. I. In ſuch operations, ſenſation for the moſt part makes an ingredient. Thoſe who do not attend to the complex nature of ſuch operations, are apt to reſolve them into ſome one of the ſimple acts of which they are compounded, overlooking the others: And from this cauſe many diſputes have been raiſed, and many errors have been occaſioned with regard to the nature of ſuch operations.

The perception of external objects is accompanied with ſome ſenſation corresponding to the object perceived, and ſuch ſenſations have, in many caſes, in all languages, the ſame name with the external object which they always accompany. The difficulty of disjoining by abſtraction, things thus conſtantly conjoined in the courſe of nature, and things, which have one and the ſame name in all languages, has likewiſe been frequently an occaſion of errors in the philoſophy of the mind. To avoid ſuch errors, nothing is of more importance than to have a diſtinct notion of that ſimple act of the mind which we call *ſenſation*, and which we have endeavoured to deſcribe. By this means we ſhall find it more eaſy to diſtinguiſh it from every external object that it accompanies, and from every other act of the mind that may be conjoined with it. For this purpoſe, it is likewiſe of importance, that the name of *ſenſation* ſhould, in philoſophical writings, be appropriated to ſignify this ſimple act of the mind, without including any thing more in its ſignification, or being applied to other purpoſes.

I ſhall add an obſervation concerning the word *feeling*. This word has two meanings. *Firſt*, It ſignifies the perceptions we have of external objects, by the ſenſe of touch. When we ſpeak of feeling a body to be hard or ſoft, rough or ſmooth, hot or cold; to feel theſe things, is to perceive them by touch. They are external things, and that act of the mind by which we feel them, is eaſily diſtinguiſhed from the objects felt. *Secondly*, The word *feeling* is uſed to ſignify the ſame thing as *ſenſation*, which we have juſt now explained; and, in this ſenſe, it has no object; the feeling and the thing felt are one and the ſame.

Perhaps

Perhaps betwixt feeling, taken in this laſt ſenſe, and ſenſation, there may be this ſmall difference, that ſenſation is moſt commonly uſed to ſignify thoſe feelings which we have by our external ſenſes and bodily appetites, and all our bodily pains and pleaſures. But there are *feelings* of a nobler nature accompanying our affections, our moral judgments, and our determinations in matters of taſte, to which the word *ſenſation* is leſs properly applied.

I have premiſed theſe obſervations on the meaning of certain words that frequently occur in treating of this ſubject, for two reaſons, *firſt*, That I may be the better underſtood when I uſe them; and *ſecondly*, That thoſe who would make any progreſs in this branch of ſcience, may accuſtom themſelves to attend very carefully to the meaning of words that are uſed in it. They may be aſſured of this, that the ambiguity of words, and the vague and improper application of them, have thrown more darkneſs upon this ſubject, than the ſubtilty and intricacy of things.

When we uſe common words, we ought to uſe them in the ſenſe in which they are moſt commonly uſed by the beſt and pureſt writers in the language; and, when we have occaſion to enlarge or reſtrict the meaning of a common word, or give it more preciſion than it has in common language, the reader ought to have warning of this, otherwiſe we ſhall impoſe upon ourſelves and upon him.

A very reſpectable writer has given a good example of this kind, by explaining in an Appendix to his *Elements of Criticiſm*, the terms he has occaſion to uſe. In that Appendix, moſt of the words are explained on which I have been making obſervations. And the explication I have given, I think, agrees, for the moſt part, with his.

Other words that need explication ſhall be explained as they occur.

CHAP. II.

Principles taken for granted.

AS there are words common to Philoſophers and to the vulgar, which need no explication; ſo there are principles common to both, which need no proof, and which do not admit of direct proof.

One who applies to any branch of ſcience muſt be come to years of underſtanding, and conſequently muſt have exerciſed his reaſon, and the other powers of his mind, in various ways. He muſt have formed various opinions and principles by which he conducts himſelf in the affairs of life. Of thoſe principles, ſome are common to all men, being evident in themſelves, and ſo neceſſary in the conduct of life, that a man cannot live and act according to the rules of common prudence without them.

All men that have common underſtanding agree in ſuch principles, and conſider a man as lunatic or deſtitute of common ſenſe, who denies, or calls them in queſtion. Thus, if any man were found of ſo ſtrange a turn as not to believe his own eyes; to put no truſt in his ſenſes, nor have the leaſt regard to their teſtimony; would any man think it worth while to reaſon gravely with ſuch a perſon, and, by argument, to convince him of his error? Surely no wiſe man would. For before men can reaſon together, they muſt agree in firſt principles; and it is impoſſible to reaſon with a man who has no principles in common with you.

There are, therefore, common principles, which are the foundation of all reaſoning, and of all ſcience. Such common principles ſeldom admit of direct proof, nor do they need it. Men need not to be taught them; for they are ſuch as all men of common

common underſtanding know; or ſuch, at leaſt, as they give a ready aſſent to, as ſoon as they are propoſed and underſtood. CHAP. II.

Such principles, when we have occaſion to uſe them in ſcience, are called *axioms*. And, although it be not abſolutely neceſſary, yet it may be of great uſe, to point out the principles or axioms on which a ſcience is grounded.

Thus, mathematicians, before they prove any of the propoſitions of mathematics, lay down certain axioms, or common principles, upon which they build their reaſonings. And although thoſe axioms be truths which every man knew before; ſuch as, That the whole is greater than a part, That equal quantities added to equal quantities, make equal ſums; yet, when we ſee nothing aſſumed in the proof of mathematical propoſitions, but ſuch ſelf-evident axioms, the propoſitions appear more certain, and leave no room for doubt or diſpute.

In all other ſciences, as well as in mathematics, it will be found, that there are a few common principles, upon which all the reaſonings in that ſcience are grounded, and into which they may be reſolved. If theſe were pointed out and conſidered, we ſhould be better able to judge what ſtreſs may be laid upon the concluſions in that ſcience. If the principles be certain, the concluſions juſtly drawn from them muſt be certain. If the principles be only probable, the concluſions can only be probable. If the principles be falſe, dubious, or obſcure, the ſuperſtructure that is built upon them muſt partake of the weakneſs of the foundation.

Sir ISAAC NEWTON, the greateſt of Natural Philoſophers, has given an example well worthy of imitation, by laying down the common principles or axioms, on which the reaſonings in natural philoſophy are built. Before this was done, the reaſonings of Philoſophers, in that ſcience, were as vague and uncertain as they are in moſt others. Nothing was fixed; all was diſpute and controverſy:

CHAP. II. verſy: But, by this happy expedient, a ſolid foundation is laid in that ſcience, and a noble ſuperſtructure is raiſed upon it, about which there is now no more diſpute or controverſy among men of knowledge, than there is about the concluſions of mathematics.

It may, however, be obſerved, that the firſt principles of natural philoſophy are of a quite different nature from mathematical axioms: They have not the ſame kind of evidence, nor are they neceſſary truths, as mathematical axioms are: They are ſuch as theſe: That ſimilar effects proceed from the ſame or ſimilar cauſes: That we ought to admit of no other cauſes of natural effects, but ſuch as are true, and ſufficient to account for the effects. Theſe are principles, which, though they have not the ſame kind of evidence that mathematical axioms have; yet have ſuch evidence, that every man of common underſtanding readily aſſents to them, and finds it abſolutely neceſſary to conduct his actions and opinions by them, in the ordinary affairs of life.

Though it has not been uſual, yet, I conceive it may be uſeful, to point out ſome of thoſe things which I ſhall take for granted, as firſt principles in treating of the mind and its faculties. There is the more occaſion for this; becauſe very ingenious men, ſuch as DES CARTES, MALEBRANCHE, ARNAULD, LOCKE, and many others, have loſt much labour, by not diſtinguiſhing things which require proof, from things which, though they may admit of illuſtration, yet being ſelf-evident, do not admit of proof. When men attempt to deduce ſuch ſelf-evident principles from others more evident, they always fall into inconcluſive reaſoning: And the conſequence of this has been, that others, ſuch as BERKELEY and HUME, finding the arguments brought to prove ſuch firſt principles to be weak and inconcluſive, have been tempted firſt to doubt of them, and afterwards to deny them.

It is ſo irkſome to reaſon with thoſe who deny firſt principles, that wiſe men commonly decline it. Yet it is not impoſſible, that what

what is only a vulgar prejudice may be miſtaken for a firſt prin- CHAP. II.
ciple. Nor is it impoſſible, that what is really a firſt principle may, by the enchantment of words, have ſuch a miſt thrown about it, as to hide its evidence, and to make a man of candour doubt of it. Such caſes happen more frequently perhaps in this ſcience than in any other; but they are not altogether without remedy. There are ways by which the evidence of firſt principles may be made more apparent when they are brought into diſpute; but they require to be handled in a way peculiar to themſelves. Their evidence is not demonſtrative, but intuitive. They require not proof, but to be placed in a proper point of view. This will be ſhown more fully in its proper place, and applied to thoſe very principles which we now aſſume. In the mean time, when they are propoſed as firſt principles, the reader is put on his guard, and warned to conſider whether they have a juſt claim to that character.

1. *Firſt*, then, I ſhall take it for granted, that I *think*, that I *remember*, that I *reaſon*, and, in general, that I really perform all thoſe operations of mind of which I am conſcious.

The operations of our minds are attended with conſciouſneſs; and this conſciouſneſs is the evidence, the only evidence which we have or can have of their exiſtence. If a man ſhould take it into his head to think or to ſay that his conſciouſneſs may deceive him, and to require proof that it cannot, I know of no proof that can be given him; he muſt be left to himſelf as a man that denies firſt principles, without which there can be no reaſoning. Every man finds himſelf under a neceſſity of believing what conſciouſneſs teſtifies, and every thing that hath this teſtimony is to be taken as a firſt principle.

2. As by conſciouſneſs we know certainly the exiſtence of our preſent thoughts and paſſions; ſo we know the paſt by remembrance. And when they are recent, and the remembrance of them freſh, the

CHAP. II. the knowledge of them, from ſuch diſtinct remembrance, is, in its certainty and evidence, next to that of conſciouſneſs.

3. But it is to be obſerved, that we are conſcious of many things to which we give little or no attention. We can hardly attend to ſeveral things at the ſame time; and our attention is commonly employed about that which is the object of our thought, and rarely about the thought itſelf. Thus, when a man is angry, his attention is turned to the injury done him, or the injurious perſon; and he gives very little attention to the paſſion of anger, although he is conſcious of it. It is in our power, however, when we come to the years of underſtanding, to give attention to our own thoughts and paſſions, and the various operations of our minds. And when we make theſe the objects of our attention, either while they are preſent, or when they are recent and freſh in our memory, this act of the mind is called *reflection*.

We take it for granted, therefore, that, by attentive reflection, a man may have a clear and certain knowledge of the operations of his own mind; a knowledge no leſs clear and certain, than that which he has of an external object when it is ſet before his eyes.

This reflection is a kind of intuition, it gives a like conviction with regard to internal objects, or things in the mind, as the faculty of ſeeing gives with regard to objects of ſight. A man muſt, therefore, be convinced beyond poſſibility of doubt, of every thing with regard to the operations of his own mind, which he clearly and diſtinctly diſcerns by attentive reflection.

4. I take it for granted that all the thoughts I am conſcious of, or remember, are the thoughts of one and the ſame thinking principle, which I call *myſelf*, or my *mind*. Every man has an immediate and irreſiſtible conviction, not only of his preſent exiſtence, but of his continued exiſtence and identity, as far back as he can remember. If any man ſhould think fit to demand

a proof that the thoughts he is ſucceſſively conſcious of belong to one and the ſame thinking principle. If he ſhould demand a proof that he is the ſame perſon to-day as he was yeſterday, or a year ago, I know no proof that can be given him: He muſt be left to himſelf, either as a man that is lunatic, or as one who denies firſt principles, and is not to be reaſoned with. CHAP. II.

Every man of a ſound mind finds himſelf under a neceſſity of believing his own identity, and continued exiſtence. The conviction of this is immediate and irreſiſtible; and if he ſhould loſe this conviction, it would be a certain proof of inſanity, which is not to be remedied by reaſoning.

5. I take it for granted that there are ſome things which cannot exiſt by themſelves, but muſt be in ſomething elſe to which they belong, as qualities or attributes.

Thus motion cannot exiſt but in ſomething that is moved. And to ſuppoſe that there can be motion while every thing is at reſt, is a groſs and palpable abſurdity. In like manner, hardneſs and ſoftneſs, ſweetneſs and bitterneſs, are things which cannot exiſt by themſelves; they are qualities of ſomething which is hard or ſoft, ſweet or bitter: That thing, whatever it be, of which they are qualities, is called their ſubject, and ſuch qualities neceſſarily ſuppoſe a ſubject.

Things which may exiſt by themſelves, and do not neceſſarily ſuppoſe the exiſtence of any thing elſe, are called ſubſtances; and with relation to the qualities or attributes that belong to them, they are called the ſubjects of ſuch qualities or attributes.

All the things which we immediately perceive by our ſenſes, and all the things we are conſcious of, are things which muſt be in ſomething elſe as their ſubject. Thus by my ſenſes, I perceive figure, colour, hardneſs, ſoftneſs, motion, reſiſtance, and ſuch

CHAP. II. like things. But theſe are qualities, and muſt neceſſarily be in ſomething that is figured, coloured, hard or ſoft, that moves, or reſiſts. It is not to theſe qualities, but to that which is the ſubject of them, that we give the name of body. If any man ſhould think fit to deny that theſe things are qualities, or that they require any ſubject, I leave him to enjoy his opinion as a man who denies firſt principles, and is not fit to be reaſoned with. If he has common underſtanding, he will find that he cannot converſe half an hour without ſaying things which imply the contrary of what he profeſſes to believe.

In like manner, the things I am conſcious of, ſuch as thought, reaſoning, deſire, neceſſarily ſuppoſe ſomething that thinks, that reaſons, that deſires. We do not give the name of mind to thought, reaſon, or deſire; but to that being which thinks, which reaſons, and which deſires.

That every act or operation, therefore, ſuppoſes an agent, that every quality ſuppoſes a ſubject, are things which I do not attempt to prove, but take for granted. Every man of common underſtanding diſcerns this immediately, and cannot entertain the leaſt doubt of it. In all languages we find certain words which, by Grammarians, are called adjectives. Such words denote attributes, and every adjective muſt have a ſubſtantive to which it belongs; that is, every attribute muſt have a ſubject. In all languages we find active verbs which denote ſome action or operation; and it is a fundamental rule in the grammar of all languages, that ſuch a verb ſuppoſes a perſon; that is, in other words, that every action muſt have an agent. We take it, therefore, as a firſt principle, that goodneſs, wiſdom, and virtue, can only be in ſome being that is good, wiſe, and virtuous; that thinking ſuppoſes a being that thinks; and that every operation we are conſcious of ſuppoſes an agent that operates, which we call mind.

6. I take it for granted that, in moſt operations of the mind, there muſt

must be an object distinct from the operation itself. I cannot see, CHAP. II.
without seeing something. To see without having any object of sight is absurd. I cannot remember, without remembering something. The thing remembered is past, while the remembrance of it is present; and therefore the operation and the object of it must be distinct things. The operations of our minds are denoted, in all languages, by active transitive verbs, which, from their construction in grammar, require not only a person or agent, but likewise an object of the operation. Thus the verb know, denotes an operation of mind. From the general structure of language, this verb requires a person; I know, you know, or he knows: But it requires no less a noun in the accusative case, denoting the thing known; for he that knows, must know something; and to know, without having any object of knowledge, is an absurdity too gross to admit of reasoning.

7. We ought likewise to take for granted, as first principles, things wherein we find an universal agreement, among the learned and unlearned, in the different nations and ages of the world. A consent of ages and nations, of the learned and vulgar, ought, at least, to have great authority, unless we can show some prejudice, as universal as that consent is, which might be the cause of it. Truth is one, but error is infinite. There are many truths so obvious to the human faculties, that it may be expected that men should universally agree in them. And this is actually found to be the case with regard to many truths, against which we find no dissent, unless perhaps that of a few sceptical Philosophers, who may justly be suspected, in such cases, to differ from the rest of mankind, through pride, obstinacy, or some favourite passion. Where there is such universal consent in things not deep nor intricate, but which lie, as it were, on the surface, there is the greatest presumption that can be, that it is the natural result of the human faculties; and it must have great authority with every sober

CHAP. II. mind that loves truth. *Major enim pars eo fere deferri ſolet quo a natura deducitur.* Cic. de Off. 1. 41.

Perhaps it may be thought, that it is impoſſible to collect the opinions of all men upon any point whatſoever, and, therefore, that this maxim can be of no uſe. But there are many caſes wherein it is otherwiſe. Who can doubt, for inſtance, whether mankind have, in all ages, believed the exiſtence of a material world, and that thoſe things which they ſee and handle are real, and not mere illuſions and apparitions? Who can doubt, whether mankind have univerſally believed, that every thing that begins to exiſt, and every change that happens in nature, muſt have a cauſe? Who can doubt, whether mankind have been univerſally perſuaded that there is a right and a wrong in human conduct? Some things which, in certain circumſtances, they ought to do, and other things which they ought not to do? The univerſality of theſe opinions, and of many ſuch that might be named, is ſufficiently evident, from the whole tenor of mens conduct, as far as our acquaintance reaches, and from the records of hiſtory, in all ages and nations, that are tranſmitted to us.

There are other opinions that appear to be univerſal, from what is common in the ſtructure of all languages, ancient and modern, poliſhed and barbarous. Language is the expreſs image and picture of human thoughts; and, from the picture, we may often draw very certain concluſions with regard to the original. We find in all languages the ſame parts of ſpeech, nouns ſubſtantive and adjective, verbs active and paſſive, varied according to the tenſes of paſt, preſent, and future; we find adverbs, prepoſitions, and conjunctions. There are general rules of ſyntax common to all languages. This uniformity in the ſtructure of language, ſhows a certain degree of uniformity in thoſe notions upon which the ſtructure of language is grounded.

We find, in the ſtructure of all languages, the diſtinction of acting

acting and being acted upon, the diſtinction of action and agent, CHAP. II.
of quality and ſubject, and many others of the like kind; which ſhows, that theſe diſtinctions are founded in the univerſal ſenſe of mankind. We ſhall have frequent occaſion to argue from the ſenſe of mankind expreſſed in the ſtructure of language; and therefore it was proper here to take notice of the force of arguments drawn from this topic.

8. I need hardly ſay, that I ſhall alſo take for granted ſuch facts as are atteſted to the conviction of all ſober and reaſonable men, either by our ſenſes, by memory, or by human teſtimony. Although ſome writers on this ſubject have diſputed the authority of the ſenſes, of memory, and of every human faculty; yet we find, that ſuch perſons, in the conduct of life, in purſuing their ends, or in avoiding dangers, pay the ſame regard to the authority of their ſenſes, and other faculties, as the reſt of mankind. By this they give us juſt ground to doubt of their candour in their profeſſions of ſcepticiſm.

This, indeed, has always been the fate of the few that have profeſſed ſcepticiſm, that, when they have done what they can to diſcredit their ſenſes, they find themſelves, after all, under a neceſſity of truſting to them. Mr HUME has been ſo candid as to acknowledge this; and it is no leſs true of thoſe who have not ſhown the ſame candour: For I never heard that any ſceptic run his head againſt a poſt, or ſtept into a kennel, becauſe he did not believe his eyes.

Upon the whole, I acknowledge that we ought to be cautious, that we do not adopt opinions as firſt principles, which are not entitled to that character. But there is ſurely the leaſt danger of mens being impoſed upon in this way, when ſuch principles openly lay claim to the character, and are thereby fairly expoſed to the examination of thoſe who may diſpute their authority. We do not pretend, that thoſe things that are laid down as firſt principles may not be examined, and that we ought not to have

CHAP. II. have our ears open to what may be pleaded againſt their being admitted as ſuch. Let us deal with them, as an upright judge does with a witneſs who has a fair character. He pays a regard to the teſtimony of ſuch a witneſs, while his character is unimpeached. But if it can be ſhown that he is ſuborned, or that he is influenced by malice or partial favour, his teſtimony loſes all its credit, and is juſtly rejected.

CHAP. III.

Of Hypotheſes.

EVERY branch of human knowledge hath its proper principles, its proper foundation and method of reaſoning; and, if we endeavour to build it upon any other foundation, it will never ſtand firm and ſtable. Thus the hiſtorian builds upon teſtimony, and rarely indulges conjecture. The antiquarian mixes conjecture with teſtimony; and the former often makes the larger ingredient. The mathematician pays not the leaſt regard either to teſtimony or conjecture, but deduces every thing, by demonſtrative reaſoning, from his definitions and axioms. Indeed, whatever is built upon conjecture, is improperly called ſcience; for conjecture may beget opinion, but cannot produce knowledge. Natural philoſophy muſt be built upon the phænomena of the material ſyſtem, diſcovered by obſervation and experiment.

When men firſt began to philoſophiſe, that is, to carry their thoughts beyond the objects of ſenſe, and to enquire into the cauſes of things, and the ſecret operations of nature, it was very natural for them to indulge conjecture; nor was it to be expected, that, in many ages, they ſhould diſcover the proper and ſcientific way of proceeding in philoſophical diſquiſitions. Accordingly we find, that the moſt ancient ſyſtems in every branch of philoſophy were nothing but the conjectures of men famous for their wiſdom, whoſe fame gave authority to their opinions. Thus, in early ages, wiſe

wiſe men conjectured, that this earth is a vaſt plain, ſurrounded on all hands by a boundleſs ocean. That from this ocean, the ſun, moon, and ſtars, emerge at their riſing, and plunge into it again at their ſetting. CHAP. III.

With regard to the mind, men in their rudeſt ſtate are apt to conjecture, that the principle of life in a man is his breath; becauſe the moſt obvious diſtinction between a living and a dead man is, that the one breathes, and the other does not. To this it is owing, that, in ancient languages, the word which denotes the ſoul, is that which properly ſignifies breath or air.

As men advance in knowledge, their firſt conjectures appear ſilly and childiſh, and give place to others, which tally better with later obſervations and diſcoveries. Thus one ſyſtem of philoſophy ſucceeds another, without any claim to ſuperior merit; but this, that it is a more ingenious ſyſtem of conjectures, and accounts better for common appearances.

To omit many ancient ſyſtems of this kind, DES CARTES, about the middle of the laſt century, diſſatisfied with the *materia prima*, the *ſubſtantial forms*, and the *occult qualities* of the Peripatetics, conjectured boldly, that the heavenly bodies of our ſyſtem are carried round by a vortex or whirlpool of ſubtile matter, juſt as ſtraws and chaff are carried round in a tub of water. He conjectured, that the ſoul is ſeated in a ſmall gland in the brain, called the pineal gland: That there, as in her chamber of preſence, ſhe receives intelligence of every thing that affects the ſenſes, by means of a ſubtile fluid contained in the nerves, called the animal ſpirits; and that ſhe diſpatches theſe animal ſpirits, as her meſſengers, to put in motion the ſeveral muſcles of the body, as there is occaſion. By ſuch conjectures as theſe, DES CARTES could account for every phænomenon in nature, in ſuch a plauſible manner, as gave ſatisfaction to a great part of the learned world for more than half a century.

Such

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Such conjectures in philoſophical matters have commonly got the name of *hypotheſes*, or *theories*. And the invention of a hypotheſis, founded on ſome ſlight probabilities, which accounts for many appearances of nature, has been conſidered as the higheſt attainment of a Philoſopher. If the hypotheſis hangs well together, is embelliſhed by a lively imagination, and ſerves to account for common appearances; it is conſidered by many as having all the qualities that ſhould recommend it to our belief; and all that ought to be required in a philoſophical ſyſtem.

There is ſuch proneneſs in men of genius to invent hypotheſes, and in others to acquieſce in them, as the utmoſt which the human faculties can attain in philoſophy, that it is of the laſt conſequence to the progreſs of real knowledge, that men ſhould have a clear and diſtinct underſtanding of the nature of hypotheſes in philoſophy, and of the regard that is due to them.

Although ſome conjectures may have a conſiderable degree of probability, yet it is evidently in the nature of conjecture to be uncertain. In every caſe the aſſent ought to be proportioned to the evidence; for to believe firmly, what has but a ſmall degree of probability, is a manifeſt abuſe of our underſtanding. Now, though we may, in many caſes, form very probable conjectures concerning the works of men, every conjecture we can form with regard to the works of God, has as little probability as the conjectures of a child with regard to the works of a man.

The wiſdom of God exceeds that of the wiſeſt man, more than his wiſdom exceeds that of a child. If a child were to conjecture how an army is to be formed in the day of battle; how a city is to be fortified, or a ſtate governed; what chance has he to gueſs right? As little chance has the wiſeſt man when he pretends to conjecture how the planets move in their courſes, how the ſea ebbs and flows, and how our minds act upon our bodies.

If

If a thouſand of the greateſt wits that ever the world produced, were, without any previous knowledge in anatomy, to ſit down and contrive how, and by what internal organs, the various functions of the human body are carried on; how the blood is made to circulate, and the limbs to move, they would not in a thouſand years hit upon any thing like the truth.

Of all the diſcoveries that have been made concerning the inward ſtructure of the human body, never one was made by conjecture. Accurate obſervations of Anatomiſts have brought to light innumerable artifices of nature in the contrivance of this machine of the human body, which we cannot but admire as excellently adapted to their ſeveral purpoſes. But the moſt ſagacious phyſiologiſt never dreamed of them till they were diſcovered. On the other hand, innumerable conjectures, formed in different ages, with regard to the ſtructure of the body, have been confuted by obſervation, and none ever confirmed.

What we have ſaid of the internal ſtructure of the human body, may be ſaid, with juſtice, of every other part of the works of God, wherein any real diſcovery has been made. Such diſcoveries have always been made by patient obſervation, by accurate experiments, or by concluſions drawn by ſtrict reaſoning from obſervations and experiments; and ſuch diſcoveries have always tended to refute, but not to confirm, the theories and hypotheſes which ingenious men had invented.

As this is a fact confirmed by the hiſtory of philoſophy in all paſt ages, it ought to have taught men, long ago, to treat with juſt contempt hypotheſes in every branch of philoſophy, and to deſpair of ever advancing real knowledge in that way. The Indian Philoſopher, being at a loſs to know how the earth was ſupported, invented the hypotheſis of a huge elephant; and this elephant he ſuppoſed to ſtand upon the back of a huge tortoiſe. This hypotheſis, however ridiculous it appears to us, might ſeem very rea-

 ſonable

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ſonable to other Indians, who knew no more than the inventor of it; and the ſame will be the fate of all hypotheſes invented by men to account for the works of God: They may have a decent and plauſible appearance to thoſe who are not more knowing than the inventor; but, when men come to be more enlightened, they will always appear ridiculous and childiſh.

This has been the caſe with regard to hypotheſes that have been revered by the moſt enlightened part of mankind for hundreds of years; and it will always be the caſe to the end of the world. For, until the wiſdom of men bear ſome proportion to the wiſdom of God, their attempts to find out the ſtructure of his works, by the force of their wit and genius, will be vain.

The fineſt productions of human art are immenſely ſhort of the meaneſt works of nature. The niceſt artiſt cannot make a feather, or the leaf of a tree. Human workmanſhip will never bear a compariſon with divine. Conjectures and hypotheſes are the invention and the workmanſhip of men, and muſt bear proportion to the capacity and ſkill of the inventor; and therefore will always be very unlike to the works of God, which it is the buſineſs of philoſophy to diſcover.

The world has been ſo long befooled by hypotheſes in all parts of philoſophy, that it is of the utmoſt conſequence to every man, who would make any progreſs in real knowledge, to treat them with juſt contempt, as the reveries of vain and fanciful men, whoſe pride makes them conceive themſelves able to unfold the myſteries of nature by the force of their genius. A learned man in an epiſtle to DES CARTES has the following obſervation, which very much deſerved the attention of that Philoſopher, and of all that come after him. "When men, ſitting in their cloſet, and con-
"ſulting only their books, attempt diſquiſitions into nature, they
"may indeed tell how they would have made the world, if God
"had given them that in commiſſion; that is, they may deſcribe
"chimeras,

" chimeras, which correſpond with the imbecillity of their own " minds, no leſs than the admirable beauty of the Univerſe cor- " reſponds with the infinite perfection of its Creator; but without " an underſtanding truly divine, they can never form ſuch an " idea to themſelves as the Deity had in creating things."

Let us, therefore, lay down this as a fundamental principle in our enquiries into the ſtructure of the mind, and its operations, that no regard is due to the conjectures or hypotheſes of Philoſophers, however ancient, however generally received. Let us accuſtom ourſelves to try every opinion by the touchſtone of fact and experience. What can fairly be deduced from facts duly obſerved, or ſufficiently atteſted, is genuine and pure; it is the voice of God, and no fiction of human imagination.

The firſt rule of philoſophiſing laid down by the great NEWTON, is this; *Cauſas rerum naturalium, non plures admitti debere, quam quæ et veræ ſint, et earum phænomenis explicandis ſufficiant.* " No more " cauſes, nor any other cauſes of natural effects ought to be ad- " mitted, but ſuch as are both true, and are ſufficient for explain- " ing their appearances." This is a golden rule; it is the true and proper teſt, by which what is ſound and ſolid in philoſophy may be diſtinguiſhed from what is hollow and vain.

If a Philoſopher, therefore, pretends to ſhow us the cauſe of any natural effect, whether relating to matter or to mind; let us firſt conſider whether there is ſufficient evidence that the cauſe he aſſigns does really exiſt. If there is not, reject it with diſdain as a fiction which ought to have no place in genuine philoſophy. If the cauſe aſſigned really exiſts, conſider, in the next place, whether the effect it is brought to explain neceſſarily follows from it. Unleſs it has theſe two conditions, it is good for nothing.

When NEWTON had ſhown the admirable effects of gravitation in our planetary ſyſtem, he muſt have felt a ſtrong deſire to know

CHAP. III. its cauſe. He could have invented a hypotheſis for this purpoſe, as many had done before him. But his philoſophy was of another complexion. Let us hear what he ſays: *Rationem harum gravitatis proprietatum ex phænomenis non potui deducere, et hypotheſes non fingo. Quicquid enim ex phænomenis non deducitur hypotheſis vocanda eſt. Et hypotheſes, ſeu metaphyſicæ, ſeu phyſicæ, ſeu qualitatum occultarum, ſeu mechanicæ, in philoſophia experimentali locum non habent.*

CHAP. IV.

Of Analogy.

IT is natural to men to judge of things leſs known, by ſome ſimilitude they obſerve, or think they obſerve, between them and things more familiar or better known. In many caſes, we have no better way of judging. And where the things compared have really a great ſimilitude in their nature, when there is reaſon to think that they are ſubject to the ſame laws, there may be a conſiderable degree of probability in concluſions drawn from analogy.

Thus, we may obſerve a very great ſimilitude between this earth which we inhabit, and the other planets, Saturn, Jupiter, Mars, Venus, and Mercury. They all revolve round the ſun, as the earth does, although at different diſtances, and in different periods. They borrow all their light from the ſun, as the earth does. Several of them are known to revolve round their axis like the earth, and, by that means, muſt have a like ſucceſſion of day and night. Some of them have moons, that ſerve to give them light in the abſence of the ſun, as our moon does to us. They are all, in their motions, ſubject to the ſame law of gravitation, as the earth is. From all this ſimilitude, it is not unreaſonable to think, that thoſe planets may, like our earth, be the habitation of various orders

orders of living creatures. There is ſome probability in this conclusion from analogy. CHAP. IV.

In medicine, Phyſicians muſt, for the moſt part, be directed in their preſcriptions by analogy. The conſtitution of one human body is ſo like to that of another, that it is reaſonable to think, that what is the cauſe of health or ſickneſs to one, may have the ſame effect upon another. And this generally is found true, though not without ſome exceptions.

In politics, we reaſon, for the moſt part, from analogy. The conſtitution of human nature is ſo ſimilar in different ſocieties or commonwealths, that the cauſes of peace and war, of tranquillity and ſedition, of riches and poverty, of improvement and degeneracy, are much the ſame in all.

Analogical reaſoning, therefore, is not, in all caſes, to be rejected. It may afford a greater or a leſs degree of probability, according as the things compared are more or leſs ſimilar in their nature. But it ought to be obſerved, that, as this kind of reaſoning can afford only probable evidence at beſt; ſo unleſs great caution be uſed, we are apt to be led into error by it. For men are naturally diſpoſed to conceive a greater ſimilitude in things than there really is.

To give an inſtance of this: Anatomiſts, in ancient ages, ſeldom diſſected human bodies; but very often the bodies of thoſe quadrupeds, whoſe internal ſtructure was thought to approach neareſt to that of the human body. Modern Anatomiſts have diſcovered many miſtakes the ancients were led into, by their conceiving a greater ſimilitude between the ſtructure of men and of ſome beaſts than there is in reality. By this, and many other inſtances that might be given, it appears, that concluſions built on analogy ſtand on a ſlippery foundation; and that we ought never to reſt upon evidence of this kind, when we can have more direct evidence.

CHAP. IV.

I know no Author who has made a more juſt and a more happy uſe of this mode of reaſoning, than Biſhop BUTLER, in his Analogy of Religion, Natural and Revealed, to the Conſtitution and Courſe of Nature. In that excellent Work, the Author does not ground any of the truths of religion upon analogy, as their proper evidence. He only makes uſe of analogy to anſwer objections againſt them. When objections are made againſt the truths of religion, which may be made with equal ſtrength againſt what we know to be true in the courſe of nature, ſuch objections can have no weight.

Analogical reaſoning, therefore, may be of excellent uſe in anſwering objections againſt truths which have other evidence. It may likewiſe give a greater or a leſs degree of probability in caſes where we can find no other evidence. But all arguments, drawn from analogy, are ſtill the weaker, the greater diſparity there is between the things compared; and therefore muſt be weakeſt of all when we compare body with mind, becauſe there are no two things in nature more unlike.

There is no ſubject in which men have always been ſo prone to form their notions by analogies of this kind, as in what relates to the mind. We form an early acquaintance with material things by means of our ſenſes, and are bred up in a conſtant familiarity with them. Hence we are apt to meaſure all things by them; and to aſcribe to things moſt remote from matter, the qualities that belong to material things. It is for this reaſon, that mankind have, in all ages, been ſo prone to conceive the mind itſelf to be ſome ſubtile kind of matter: That they have been diſpoſed to aſcribe human figure, and human organs, not only to angels, but even to the Deity. Though we are conſcious of the operations of our own minds when they are exerted, and are capable of attending to them, ſo as to form a diſtinct notion of them; this is ſo difficult a work to men, whoſe attention is conſtantly ſolicited by external objects, that we give them names from things that are familiar, and which

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are conceived to have ſome ſimilitude to them; and the notions we form of them are no leſs analogical than the names we give them. Almoſt all the words, by which we expreſs the operations of the mind, are borrowed from material objects. To underſtand, to conceive, to imagine, to comprehend, to deliberate, to infer, and many others, are words of this kind; ſo that the very language of mankind, with regard to the operations of our minds, is analogical. Becauſe bodies are affected only by contact and preſſure, we are apt to conceive, that what is an immediate object of thought, and affects the mind, muſt be in contact with it, and make ſome impreſſion upon it. When we imagine any thing, the very word leads us to think that there muſt be ſome image in the mind of the thing conceived. It is evident, that theſe notions are drawn from ſome ſimilitude conceived between body and mind, and between the properties of body and the operations of mind.

To illuſtrate more fully that analogical reaſoning from a ſuppoſed ſimilitude of mind to body, which I conceive to be the moſt fruitful ſource of error with regard to the operations of our minds, I ſhall give an inſtance of it.

When a man is urged by contrary motives, thoſe on one hand inciting him to do ſome action, thoſe on the other to forbear it; he deliberates about it, and at laſt reſolves to do it, or not to do it. The contrary motives are here compared to the weights in the oppoſite ſcales of a balance; and there is not perhaps any inſtance that can be named of a more ſtriking analogy between body and mind. Hence the phraſes of weighing motives, of deliberating upon actions, are common to all languages.

From this analogy, ſome Philoſophers draw very important concluſions. They ſay, that, as the balance cannot incline to one ſide more than the other, when the oppoſite weights are equal; ſo a man cannot poſſibly determine himſelf if the motives on both hands are equal; and as the balance muſt neceſſarily turn to that ſide

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ſide which has moſt weight, ſo the man muſt neceſſarily be determined to that hand where the motive is ſtrongeſt. And on this foundation ſome of the ſchoolmen maintained, that, if a hungry aſs were placed between two bundles of hay equally inviting, the beaſt muſt ſtand ſtill and ſtarve to death, being unable to turn to either, becauſe there are equal motives to both. This is an inſtance of that analogical reaſoning, which I conceive ought never to be truſted: For the analogy between a balance and a man deliberating, though one of the ſtrongeſt that can be found between matter and mind, is too weak to ſupport any argument. A piece of dead inactive matter, and an active intelligent being, are things very unlike; and becauſe the one would remain at reſt in a certain caſe, it does not follow that the other would be inactive in a caſe ſomewhat ſimilar. The argument is no better than this, that, becauſe a dead animal moves only as it is puſhed, and, if puſhed with equal force in contrary directions, muſt remain at reſt; therefore the ſame thing muſt happen to a living animal; for ſurely the ſimilitude between a dead animal and a living, is as great as that between a balance and a man.

The concluſion I would draw from all that has been ſaid on analogy, is, that, in our enquiries concerning the mind, and its operations, we ought never to truſt to reaſonings, drawn from ſome ſuppoſed ſimilitude of body to mind; and that we ought to be very much upon our guard, that we be not impoſed upon by thoſe analogical terms and phraſes, by which the operations of the mind are expreſſed in all languages.

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CHAP. V.

Of the proper Means of knowing the Operations of the Mind.

SINCE we ought to pay no regard to hypotheſes, and to be very ſuſpicious of analogical reaſoning, it may be aſked from what ſource muſt the knowledge of the mind, and its faculties, be drawn?

I anſwer, the chief and proper ſource of this branch of knowledge is accurate reflection upon the operations of our own minds. Of this ſource we ſhall ſpeak more fully, after making ſome remarks upon two others that may be ſubſervient to it. The firſt of them is attention to the ſtructure of language.

The language of mankind is expreſſive of their thoughts, and of the various operations of their minds. The various operations of the underſtanding, will, and paſſions, which are common to mankind, have various forms of ſpeech correſponding to them in all languages, which are the ſigns of them, and by which they are expreſſed: And a due attention to the ſigns may, in many caſes, give conſiderable light to the things ſignified by them.

There are in all languages modes of ſpeech, by which men ſignify their judgment, or give their teſtimony; by which they accept or refuſe; by which they aſk information or advice; by which they command, or threaten, or ſupplicate; by which they plight their faith in promiſes or contracts. If ſuch operations were not common to mankind, we ſhould not find in all languages forms of ſpeech, by which they are expreſſed.

All languages, indeed, have their imperfections; they can never be adequate to all the varieties of human thought; and therefore things may be really diſtinct in their nature, and capable of being diſtinguiſhed by the human mind, which are not diſtinguiſh-

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ed in common language. We can only expect, in the ſtructure of languages, thoſe diſtinctions which all mankind in the common buſineſs of life have occaſion to make.

There may be peculiarities in a particular language, of the cauſes of which we are ignorant, and from which, therefore, we can draw no concluſion. But whatever we find common to all languages, muſt have a common cauſe; muſt be owing to ſome common notion or ſentiment of the human mind.

We gave ſome examples of this before, and ſhall here add another. All languages have a plural number in many of their nouns; from which we may infer, that all men have notions, not of individual things only, but of attributes, or things which are common to many individuals; for no individual can have a plural number.

Another ſource of information in this ſubject, is a due attention to the courſe of human actions and conduct. The actions of men are effects: Their ſentiments, their paſſions, and their affections, are the cauſes of thoſe effects; and we may, in many caſes, form a judgment of the cauſe from the effect.

The behaviour of parents towards their children gives ſufficient evidence, even to thoſe who never had children, that the parental affection is common to mankind. It is eaſy to ſee, from the general conduct of men, what are the natural objects of their eſteem, their admiration, their love, their approbation, their reſentment, and of all their other original diſpoſitions. It is obvious, from the conduct of men in all ages, that man is by his nature a ſocial animal; that he delights to aſſociate with his ſpecies; to converſe, and to exchange good offices with them.

Not only the actions, but even the opinions of men may ſometimes give light into the frame of the human mind. The opinions of men may be conſidered as the effects of their intellectual powers,

as their actions are the effects of their active principles. Even the prejudices and errors of mankind, when they are general, muſt have ſome cauſe no leſs general; the diſcovery of which will throw ſome light upon the frame of the human underſtanding. CHAP. V.

I conceive this to be the principal uſe of the hiſtory of philoſophy. When we trace the hiſtory of the various philoſophical opinions that have ſprung up among thinking men, we are led into a labyrinth of fanciful opinions, contradictions, and abſurdities, intermixed with ſome truths; yet we may ſometimes find a clue to lead us through the ſeveral windings of this labyrinth: We may find that point of view which preſented things to the author of the ſyſtem, in the light in which they appeared to him. This will often give a conſiſtency to things ſeemingly contradictory, and ſome degree of probability to thoſe that appeared moſt fanciful.

The hiſtory of philoſophy, conſidered as a map of the intellectual operations of men of genius, muſt always be entertaining, and may ſometimes give us views of the human underſtanding, which could not eaſily be had any other way.

I return to what I mentioned as the main ſource of information on this ſubject; attentive reflection upon the operations of our own minds.

All the notions we have of mind, and of its operations, are, by Mr LOCKE, called *ideas of reflection*. A man may have as diſtinct notions of remembrance, of judgment, of will, of deſire, as he has of any object whatever. Such notions, as Mr LOCKE juſtly obſerves, are got by the power of reflection. But what is this power of reflection? It is, ſays the ſame author, "that power by which "the mind turns its view inward, and obſerves its own actions "and operations." He obſerves elſewhere, "That the under-"ſtanding, like the eye, whilſt it makes us ſee and perceive all

CHAP. V. "other things, takes no notice of itſelf; and that it requires "art and pains to ſet it at a diſtance, and make it its own "object." CICERO hath expreſſed this ſentiment moſt beautifully. Tuſc. I. 28.

This power of the underſtanding to make its own operations its object, to attend to them, and examine them on all ſides, is the power of reflection, by which alone we can have any diſtinct notion of the powers of our own, or of other minds.

This reflection ought to be diſtinguiſhed from conſciouſneſs, with which it is too often confounded, even by Mr LOCKE. All men are conſcious of the operations of their own minds, at all times, while they are awake; but there are few who reflect upon them, or make them objects of thought.

From infancy, till we come to the years of underſtanding, we are employed ſolely about external objects. And, although the mind is conſcious of its operations, it does not attend to them; its attention is turned ſolely to the external objects, about which thoſe operations are employed. Thus, when a man is angry, he is conſcious of his paſſion; but his attention is turned to the perſon who offended him, and the circumſtances of the offence, while the paſſion of anger is not in the leaſt the object of his attention.

I conceive, this is ſufficient to ſhew the difference between conſciouſneſs of the operations of our minds, and reflection upon them; and to ſhew that we may have the former without any degree of the latter. The difference between conſciouſneſs and reflection, is like to the difference between a ſuperficial view of an object which preſents itſelf to the eye, while we are engaged about ſomething elſe, and that attentive examination which we give to an object when we are wholly employed in ſurveying it. Attention is a voluntary act; it requires an active exertion to begin and to continue it; and it may be continued as long as we will; but conſciouſneſs

ſciouſneſs is involuntary and of no continuance, changing with every thought. CHAP. V.

The power of reflection upon the operations of their own minds does not appear at all in children. Men muſt be come to ſome ripeneſs of underſtanding before they are capable of it. Of all the powers of the human mind, it ſeems to be the laſt that unfolds itſelf. Moſt men ſeem incapable of acquiring it in any conſiderable degree. Like all our other powers, it is greatly improved by exerciſe; and until a man has got the habit of attending to the operations of his own mind, he can never have clear and diſtinct notions of them, nor form any ſteady judgment concerning them. His opinions muſt be borrowed from others, his notions confuſed and indiſtinct, and he may eaſily be led to ſwallow very groſs abſurdities. To acquire this habit, is a work of time and labour, even in thoſe who begin it early, and whoſe natural talents are tolerably fitted for it; but the difficulty will be daily diminiſhing, and the advantage of it is great. They will thereby be enabled to think with preciſion and accuracy on every ſubject, eſpecially on thoſe ſubjects that are more abſtract. They will be able to judge for themſelves in many important points, wherein others muſt blindly follow a leader.

CHAP. VI.

Of the Difficulty of attending to the Operations of our own Minds.

THE difficulty of attending to our mental operations ought to be well underſtood, and juſtly eſtimated, by thoſe who would make any progreſs in this ſcience; that they may neither, on the one hand, expect ſucceſs without pains and application of thought; nor, on the other, be diſcouraged, by conceiving that the obſtacles that lie in the way are inſuperable, and that there is no certainty to be attained in it. I ſhall, therefore, endeavour to point out

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out the cauſes of this difficulty, and the effects that have ariſen from it, that we may be able to form a true judgment of both.

1. The number and quick ſucceſſion of the operations of the mind make it difficult to give due attention to them. It is well known, that if a great number of objects be preſented in quick ſucceſſion, even to the eye, they are confounded in the memory and imagination. We retain a confuſed notion of the whole, and a more confuſed one of the ſeveral parts, eſpecially if they are objects to which we have never before given particular attention. No ſucceſſion can be more quick than that of thought. The mind is buſy while we are awake, continually paſſing from one thought, and one operation, to another. The ſcene is conſtantly ſhifting. Every man will be ſenſible of this, who tries but for one minute to keep the ſame thought in his imagination, without addition or variation. He will find it impoſſible to keep the ſcene of his imagination fixed. Other objects will intrude without being called, and all he can do is to reject theſe intruders as quickly as poſſible, and return to his principal object.

2. In this exerciſe, we go contrary to habits which have been early acquired, and confirmed by long unvaried practice. From infancy, we are accuſtomed to attend to objects of ſenſe, and to them only; and, when ſenſible objects have got ſuch ſtrong hold of the attention by confirmed habit, it is not eaſy to diſpoſſeſs them. When we grow up, a variety of external objects ſolicits our attention, excites our curioſity, engages our affections, or touches our paſſions; and the conſtant round of employment about external objects, draws off the mind from attending to itſelf; ſo that nothing is more juſt than the obſervation of Mr LOCKE before mentioned, "That the underſtanding, like the eye, while it ſurveys "all the objects around it, commonly takes no notice of itſelf."

3. The operations of the mind, from their very nature, lead the mind to give its attention to ſome other object. Our ſenſations,

tions, as will be ſhown afterwards, are natural ſigns, and turn our attention to the things ſignified by them; ſo much, that moſt of them, and thoſe the moſt frequent and familiar, have no name in any language. In perception, memory, judgment, imagination, and reaſoning, there is an object diſtinct from the operation itſelf; and, while we are led by a ſtrong impulſe to attend to the object, the operation eſcapes our notice. Our paſſions, affections, and all our active powers, have, in like manner, their objects which engroſs our attention, and divert it from the paſſion itſelf.

4. To this we may add a juſt obſervation made by Mr HUME, That, when the mind is agitated by any paſſion, as ſoon as we turn our attention from the object to the paſſion itſelf, the paſſion ſubſides or vaniſhes, and by that means eſcapes our enquiry. This, indeed, is common to almoſt every operation of the mind: When it is exerted, we are conſcious of it; but then we do not attend to the operation, but to its object. When the mind is drawn off from the object to attend to its own operation, that operation ceaſes, and eſcapes our notice.

5. As it is not ſufficient to the diſcovery of mathematical truths, that a man be able to attend to mathematical figures; as it is neceſſary that he ſhould have the ability to diſtinguiſh accurately things that differ, and to diſcern clearly the various relations of the quantities he compares; an ability which, though much greater in thoſe who have the force of genius than in others, yet even in them requires exerciſe and habit to bring it to maturity: So, in order to diſcover the truth in what relates to the operations of the mind, it is not enough that a man be able to give attention to them; he muſt have the ability to diſtinguiſh accurately their minute differences; to reſolve and analyſe complex operations into their ſimple ingredients; to unfold the ambiguity of words, which in this ſcience is greater than in any other, and to give them the ſame accuracy and preciſion that mathematical terms have. For, indeed, the ſame preciſion in the uſe of words; the ſame cool attention to the

CHAP. VI. the minute differences of things; the ſame talent for abſtraction and analyſing, which fits a man for the ſtudy of mathematics, is no leſs neceſſary in this. But there is this great difference between the two ſciences, that the objects of mathematics being things external to the mind, it is much more eaſy to attend to them, and fix them ſteadily in the imagination.

The difficulty attending our enquiries into the powers of the mind, ſerves to account for ſome events reſpecting this branch of philoſophy, which deſerve to be mentioned.

While moſt branches of ſcience have, either in ancient or in modern times, been highly cultivated, and brought to a conſiderable degree of perfection, this remains, to this day, in a very low ſtate, and as it were in its infancy.

Every ſcience invented by men muſt have its beginning and its progreſs; and, from various cauſes, it may happen that one ſcience ſhall be brought to a great degree of maturity, while another is yet in its infancy. The maturity of a ſcience may be judged of by this: When it contains a ſyſtem of principles, and concluſions drawn from them, which are ſo firmly eſtabliſhed, that, among thinking and intelligent men, there remains no doubt or diſpute about them; ſo that thoſe who come after may raiſe the ſuperſtructure higher, but ſhall never be able to overturn what is already built, in order to begin on a new foundation.

Geometry ſeems to have been in its infancy about the time of THALES and PYTHAGORAS; becauſe many of the elementary propoſitions, on which the whole ſcience is built, are aſcribed to them as the inventors. EUCLID'S Elements, which were written ſome ages after PYTHAGORAS, exhibit a ſyſtem of geometry which deſerves the name of a ſcience; and though great additions have been made by APPOLLONIUS, ARCHIMEDES, PAPPUS, and others among the ancients, and ſtill greater by the moderns; yet what

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was laid down in EUCLID's Elements was never ſet aſide. It remains as the firm foundation of all future ſuperſtructures in that ſcience.

Natural philoſophy remained in its infant ſtate near two thouſand years after geometry had attained to its manly form: For natural philoſophy ſeems not to have been built on a ſtable foundation, nor carried to any degree of maturity, till the laſt century. The ſyſtem of DES CARTES, which was all hypotheſis, prevailed in the moſt enlightened part of Europe till towards the end of laſt century. Sir ISAAC NEWTON has the merit of giving the form of a ſcience to this branch of philoſophy; and it need not appear ſurpriſing, if the philoſophy of the human mind ſhould be a century or two later in being brought to maturity.

It has received great acceſſions from the labours of ſeveral modern authors; and perhaps wants little more to entitle it to the name of a ſcience, but to be purged of certain hypotheſes, which have impoſed on ſome of the moſt acute writers on this ſubject, and led them into downright ſcepticiſm.

What the ancients have delivered to us concerning the mind, and its operations, is almoſt entirely drawn, not from accurate reflection, but from ſome conceived analogy between body and mind. And although the modern authors I formerly named have given more attention to the operations of their own minds, and by that means have made important diſcoveries; yet, by retaining ſome of the ancient analogical notions, their diſcoveries have been leſs uſeful than they might have been, and have led to ſcepticiſm.

It may happen in ſcience, as in building, that an error in the foundation ſhall weaken the whole; and the farther the building is carried on, this weakneſs ſhall become the more apparent and the more threatening. Something of this kind ſeems to have happened in our ſyſtems concerning the mind. The acceſſion they

CHAP. VI. have received by modern diſcoveries, though very important in itſelf, has thrown darkneſs and obſcurity upon the whole, and has led men rather to ſcepticiſm than to knowledge. This muſt be owing to ſome fundamental errors that have not been obſerved; and when theſe are corrected, it is to be hoped, that the improvements that have been made will have their due effect.

The laſt effect I obſerve of the difficulty of enquiries into the powers of the mind, is, that there is no other part of human knowledge, in which ingenious authors have been ſo apt to run into ſtrange paradoxes, and even into groſs abſurdities.

When we find Philoſophers maintaining that there is no heat in the fire, nor colour in the rainbow: When we find the graveſt Philoſophers, from DES CARTES down to Biſhop BERKELEY, muſtering up arguments to prove the exiſtence of a material world, and unable to find any that will bear examination: When we find Biſhop BERKELEY and Mr HUME, the acuteſt Metaphyſicians of the age, maintaining that there is no ſuch thing as matter in the univerſe: That ſun, moon, and ſtars, the earth which we inhabit, our own bodies, and thoſe of our friends, are only ideas in our minds, and have no exiſtence but in thought: When we find the laſt maintaining that there is neither body nor mind; nothing in nature but ideas and impreſſions, without any ſubſtance on which they are impreſſed: That there is no certainty, nor indeed probability, even in mathematical axioms: I ſay, when we conſider ſuch extravagancies of many of the moſt acute writers on this ſubject, we may be apt to think the whole to be only a dream of fanciful men, who have entangled themſelves in cobwebs ſpun out of their own brain. But we ought to conſider, that the more cloſely and ingeniouſly men reaſon from falſe principles, the more abſurdities they will be led into; and when ſuch abſurdities help to bring to light the falſe principles from which they are drawn, they may be the more eaſily forgiven.

CHAP.

CHAP. VII.

Diviſion of the Powers of the Mind.

THE powers of the mind are ſo many, ſo various, and ſo connected and complicated in moſt of its operations, that there never has been any diviſion of them propoſed which is not liable to conſiderable objections. We ſhall therefore take that general diviſion which is the moſt common, into the powers of *underſtanding* and thoſe of *will*. Under the will we comprehend our active powers, and all that lead to action, or influence the mind to act; ſuch as, appetites, paſſions, affections. The underſtanding comprehends our contemplative powers; by which we perceive objects; by which we conceive or remember them; by which we analyſe or compound them; and by which we judge and reaſon concerning them.

Although this general diviſion may be of uſe in order to our proceeding more methodically in our ſubject, we are not to underſtand it as if, in thoſe operations which are aſcribed to the underſtanding, there were no exertion of will or activity, or as if the underſtanding were not employed in the operations aſcribed to the will; for I conceive there is no operation of the underſtanding wherein the mind is not active in ſome degree. We have ſome command over our thoughts, and can attend to this or to that, of many objects which preſent themſelves to our ſenſes, to our memory, or to our imagination. We can ſurvey an object on this ſide or that, ſuperficially or accurately, for a longer or a ſhorter time; ſo that our contemplative powers are under the guidance and direction of the active; and the former never purſue their object without being led and directed, urged or reſtrained by the latter: And becauſe the underſtanding is always more or leſs directed by the will, mankind have aſcribed ſome degree of activity to

CHAP. VII. the mind in its intellectual operations, as well as in thoſe which belong to the will, and have expreſſed them by active verbs, ſuch as ſeeing, hearing, judging, reaſoning, and the like.

And as the mind exerts ſome degree of activity even in the operations of underſtanding, ſo it is certain that there can be no act of will which is not accompanied with ſome act of underſtanding. The will muſt have an object, and that object muſt be apprehended or conceived in the underſtanding. It is therefore to be remembered, that in moſt, if not all operations of the mind, both faculties concur; and we range the operation under that faculty which hath the largeſt ſhare in it.

The intellectual powers are commonly divided into ſimple apprehenſion, judgment, and reaſoning. As this diviſion has in its favour the authority of antiquity, and of a very general reception, it would be improper to ſet it aſide without giving any reaſon; I ſhall therefore explain it briefly, and give the reaſons why I chuſe to follow another.

It may be obſerved, that, without apprehenſion of the objects, concerning which we judge, there can be no judgment; as little can there be reaſoning without both apprehenſion and judgment: Theſe three operations, therefore, are not independent of each other. The ſecond includes the firſt, and the third includes both the firſt and ſecond: But the firſt may be exerciſed without either of the other two. It is on that account called *ſimple apprehenſion*; that is, apprehenſion unaccompanied with any judgment about the object apprehended. This ſimple apprehenſion of an object is, in common language, called *having a notion, or having a conception* of the object, and by late authors is called *having an idea of it*. In ſpeaking, it is expreſſed by a word, or by a part of a propoſition, without that compoſition and ſtructure which makes a complete ſentence; as *a man, a man of fortune*. Such words, taken by themſelves, ſignify ſimple apprehenſions. They neither affirm nor deny;

deny; they imply no judgment or opinion of the thing ſignified by them, and therefore cannot be ſaid to be either true or falſe. CHAP. VII.

The ſecond operation in this diviſion is *judgment*; in which, ſay the Philoſophers, there muſt be two objects of thought compared, and ſome agreement or diſagreement, or, in general, ſome relation diſcerned between them; in conſequence of which, there is an opinion or belief of that relation which we diſcern. This operation is expreſſed in ſpeech by a propoſition, in which ſome relation between the things compared is affirmed or denied: As when we ſay, *All men are fallible.*

Truth and falſehood are qualities which belong to judgment only; or to propoſitions by which judgment is expreſſed. Every judgment, every opinion, and every propoſition, is either true or falſe. But words which neither affirm nor deny any thing, can have neither of thoſe qualities; and the ſame may be ſaid of ſimple apprehenſions, which are ſignified by ſuch words.

The third operation is *reaſoning*; in which, from two or more judgments, we draw a concluſion.

This diviſion of our intellectual powers correſponds perfectly with the account commonly given by Philoſophers, of the ſucceſſive ſteps by which the mind proceeds in the acquiſition of its knowledge; which are theſe three: *Firſt*, by the ſenſes, or by other means, it is furniſhed with various ſimple apprehenſions, notions, or ideas. Theſe are the materials which nature gives it to work upon; and from the ſimple ideas it is furniſhed with by nature, it forms various others more complex. *Secondly*, by comparing its ideas, and by perceiving their agreements and diſagreements, it forms its judgments. And, *laſtly*, from two or more judgments, it deduces concluſions of reaſoning.

Now, if all our knowledge is got by a procedure of this kind, certainly

CHAP. VII. certainly the threefold diviſion of the powers of underſtanding, into ſimple apprehenſion, judgment and reaſoning, is the moſt natural, and the moſt proper, that can be deviſed. This theory and that diviſion are ſo cloſely connected, that it is difficult to judge which of them has given riſe to the other; and they muſt ſtand or fall together. But if all our knowledge is not got by a proceſs of this kind; if there are other avenues of knowledge beſides the comparing our ideas, and perceiving their agreements and diſagreements, it is probable that there may be operations of the underſtanding which cannot be properly reduced under any of the three that have been explained.

Let us conſider ſome of the moſt familiar operations of our minds, and ſee to which of the three they belong. I begin with conſciouſneſs. I know that I think, and this of all knowledge is the moſt certain. Is that operation of my mind, which gives me this certain knowledge, to be called ſimple apprehenſion? No, ſurely. Simple apprehenſion neither affirms nor denies. It will not be ſaid that it is by reaſoning that I know that I think. It remains, therefore, that it muſt be by judgment, that is, according to the account given of judgment, by comparing two ideas, and perceiving the agreement between them. But what are the ideas compared? They muſt be the idea of myſelf, and the idea of thought, for they are the terms of the propoſition *I think*. According to this account then, firſt, I have the idea of myſelf, and the idea of thought; then, by comparing theſe two ideas, I perceive that I think.

Let any man who is capable of reflection judge for himſelf, whether it is by an operation of this kind that he comes to be convinced that he thinks? To me it appears evident, that the conviction I have that I think, is not got in this way; and therefore I conclude, either that conſciouſneſs is not judgment, or that judgment is not rightly defined to be the perception of ſome agreement or diſagreement between two ideas.

The perception of an object by my ſenſes, is another operation of the

the underſtanding. I would know whether it be ſimple apprehenſion, or judgment, or reaſoning. It is not ſimple apprehenſion, becauſe I am perſuaded of the exiſtence of the object as much as I could be by demonſtration. It is not judgment, if by judgment be meant the comparing ideas, and perceiving their agreements or diſagreements. It is not reaſoning, becauſe thoſe who cannot reaſon can perceive.

I find the ſame difficulty in claſſing memory under any of the operations mentioned.

There is not a more fruitful ſource of error in this branch of philoſophy, than diviſions of things which are taken to be complete when they are not really ſo. To make a perfect diviſion of any claſs of things, a man ought to have the whole under his view at once. But the greateſt capacity very often is not ſufficient for this. Some thing is left out which did not come under the Philoſopher's view when he made his diviſion: And to ſuit this to the diviſion, it muſt be made what nature never made it. This has been ſo common a fault of Philoſophers, that one who would avoid error ought to be ſuſpicious of diviſions, though long received, and of great authority, eſpecially when they are grounded on a theory that may be called in queſtion. In a ſubject imperfectly known, we ought not to pretend to perfect diviſions, but to leave room for ſuch additions or alterations as a more perfect view of the ſubject may afterwards ſuggeſt.

I ſhall not, therefore, attempt a complete enumeration of the powers of the human underſtanding. I ſhall only mention thoſe which I propoſe to explain, and they are the following:

1ſt, The powers we have by means of our external ſenſes. *2dly*, Memory. *3dly*, Conception. *4thly*, The powers of reſolving and analyſing complex objects, and compounding thoſe that are more ſimple. *5thly*, Judging. *6thly*, Reaſoning. *7thly*, Taſte. *8thly*, Moral Perception; and, *laſt* of all, Conſciouſneſs.

CHAP.

CHAP. VIII.

Of ſocial Operations of Mind.

THERE is another diviſion of the powers of the mind, which, though it has been, ought not to be overlooked by writers on this ſubject, becauſe it has a real foundation in nature. Some operations of our minds, from their very nature, are *ſocial*, others are *ſolitary*.

By the firſt, I underſtand ſuch operations as neceſſarily ſuppoſe an intercourſe with ſome other intelligent being. A man may underſtand and will; he may apprehend, and judge, and reaſon, though he ſhould know of no intelligent being in the univerſe beſides himſelf. But, when he aſks information, or receives it; when he bears teſtimony, or receives the teſtimony of another; when he aſks a favour, or accepts one; when he gives a command to his ſervant, or receives one from a ſuperior: when he plights his faith in a promiſe or contract; theſe are acts of ſocial intercourſe between intelligent beings, and can have no place in ſolitude. They ſuppoſe underſtanding and will; but they ſuppoſe ſomething more, which is neither underſtanding nor will; that is, ſociety with other intelligent beings. They may be called intellectual, becauſe they can only be in intellectual beings: But they are neither ſimple apprehenſion, nor judgment, nor reaſoning, nor are they any combination of theſe operations.

To aſk a queſtion, is as ſimple an operation as to judge or to reaſon; yet it is neither judgment, nor reaſoning, nor ſimple apprehenſion, nor is it any compoſition of theſe. Teſtimony is neither ſimple apprehenſion, nor judgment, nor reaſoning. The ſame may be ſaid of a promiſe, or of a contract. Theſe acts of mind are perfectly underſtood by every man of common underſtanding; but, when Philoſophers attempt to bring them within the pale of their diviſions, by analyſing them, they find inexplicable myſteries,

ries, and even contradictions, in them. One may see an instance of this, of many that might be mentioned, in Mr HUME's Enquiry concerning the principles of morals, sect. 3. part 2. note, near the end. CHAP. VIII.

The attempts of Philosophers to reduce the social operations under the common philosophical divisions, resemble very much the attempts of some Philosophers to reduce all our social affections to certain modifications of self-love. The Author of our being intended us to be social beings, and has, for that end, given us social intellectual powers, as well as social affections. Both are original parts of our constitution, and the exertions of both no less natural than the exertions of those powers that are solitary and selfish.

Our social intellectual operations, as well as our social affections, appear very early in life, before we are capable of reasoning; yet both suppose a conviction of the existence of other intelligent beings. When a child asks a question of his nurse, this act of his mind supposes not only a desire to know what he asks; it supposes likewise a conviction that the nurse is an intelligent being, to whom he can communicate his thoughts, and who can communicate her thoughts to him. How he came by this conviction so early, is a question of some importance in the knowledge of the human mind, and therefore worthy of the consideration of Philosophers. But they seem to have given no attention either to this early conviction, or to those operations of mind which suppose it. Of this we shall have occasion to treat afterwards.

All languages are fitted to express the social as well as the solitary operations of the mind. It may indeed be affirmed, that, to express the former, is the primary and direct intention of language. A man, who had no intercourse with any other intelligent being, would never think of language. He would be as mute as the beasts of the field; even more so, because they have some degree of social intercourse with one another, and some of them

CHAP. VIII. with man. When language is once learned, it may be uſeful even in our ſolitary meditations; and, by clothing our thoughts with words, we may have a firmer hold of them. But this was not its firſt intention; and the ſtructure of every language ſhews that it is not intended ſolely for this purpoſe.

In every language, a queſtion, a command, a promiſe, which are ſocial acts, can be expreſſed as eaſily and as properly as judgment, which is a ſolitary act. The expreſſion of the laſt has been honoured with a particular name; it is called a propoſition; it has been an object of great attention to Philoſophers; it has been analyſed into its very elements of ſubject, predicate, and copula. All the various modifications of theſe, and of propoſitions which are compounded of them, have been anxiouſly examined in many voluminous tracts. The expreſſion of a queſtion, of a command, or of a promiſe, is as capable of being analyſed as a propoſition is; but we do not find that this has been attempted; we have not ſo much as given them a name different from the operations which they expreſs.

Why have ſpeculative men laboured ſo anxiouſly to analyſe our ſolitary operations, and given ſo little attention to the ſocial? I know no other reaſon but this, that, in the diviſions that have been made of the mind's operations, the ſocial have been omitted, and thereby thrown behind the curtain.

In all languages, the ſecond perſon of verbs, the pronoun of the ſecond perſon, and the vocative caſe in nouns, are appropriated to the expreſſion of ſocial operations of mind, and could never have had place in language but for this purpoſe: Nor is it a good argument againſt this obſervation, that, by a rhetorical figure, we ſometimes addreſs perſons that are abſent, or even inanimated beings, in the ſecond perſon. For it ought to be remembered, that all figurative ways of uſing words or phraſes ſuppoſe a natural and literal meaning of them.

ESSAY II.

OF THE POWERS WE HAVE BY MEANS OF OUR EXTERNAL SENSES.

CHAP. I.

Of the Organs of Senſe.

OF all the operations of our minds, the perception of external objects is the moſt familiar. The ſenſes come to maturity even in infancy, when other powers have not yet ſprung up. They are common to us with brute animals, and furniſh us with the objects about which our other powers are the moſt frequently employed. We find it eaſy to attend to their operations; and becauſe they are familiar, the names which properly belong to them are applied to other powers, which are thought to reſemble them; for theſe reaſons they claim to be firſt conſidered.

The perception of external objects is one main link of that myſterious chain which connects the material world with the intellectual. We ſhall find many things in this operation unaccountable; ſufficient to convince us, that we know but little of our own frame; and that a perfect comprehenſion of our mental powers, and of the manner of their operation, is beyond the reach of our underſtanding.

In perception there are impreſſions upon the organs of ſenſe, the nerves, and brain, which, by the laws of our nature, are followed by certain operations of mind. Theſe two things are apt to be confounded; but ought moſt carefully to be diſtinguiſhed. Some Philoſophers, without good reaſon, have concluded, that the

CHAP. I. impreſſions made on the body are the proper efficient cauſe of perception. Others, with as little reaſon, have concluded, that impreſſions are made on the mind ſimilar to thoſe made on the body. From theſe miſtakes many others have ariſen. The wrong notions men have raſhly taken up with regard to the ſenſes, have led to wrong notions with regard to other powers which are conceived to reſemble them. Many important powers of mind have, eſpecially of late, been called internal ſenſes, from a ſuppoſed reſemblance to the external; ſuch as, the ſenſe of beauty, the ſenſe of harmony, the moral ſenſe. And it is to be apprehended, that errors, with regard to the external, have, from analogy, led to ſimilar errors with regard to the internal; it is therefore of ſome conſequence, even with regard to other branches of our ſubject, to have juſt notions concerning the external ſenſes.

In order to this, we ſhall begin with ſome obſervations on the organs of ſenſe, and on the impreſſions which in perception are made upon them, and upon the nerves and brain.

We perceive no external object, but by means of certain bodily organs which God has given us for that purpoſe. The Supreme Being who made us, and placed us in this world, hath given us ſuch powers of mind as he ſaw to be ſuited to our ſtate and rank in his creation. He has given us the power of perceiving many objects around us, the ſun, moon, and ſtars, the earth and ſea, and a variety of animals, vegetables, and inanimate bodies. But our power of perceiving theſe objects is limited in various ways, and particularly in this; that without the organs of the ſeveral ſenſes, we perceive no external object. We cannot ſee without eyes, nor hear without ears: It is not only neceſſary that we ſhould have theſe organs, but that they ſhould be in a ſound and natural ſtate. There are many diſorders of the eye that cauſe total blindneſs; others that impair the powers of viſion, without deſtroying it altogether; and the ſame may be ſaid of the organs of all the other ſenſes.

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All this is ſo well known from experience, that it needs no proof; but it ought to be obſerved, that we know it from experience only. We can give no reaſon for it, but that ſuch is the will of our Maker. No man can ſhew it to be impoſſible to the Supreme Being to have given us the power of perceiving external objects without ſuch organs. We have reaſon to believe, that when we put off theſe bodies, and all the organs belonging to them, our perceptive powers ſhall rather be improved than deſtroyed or impaired. We have reaſon to believe, that the Supreme Being perceives every thing in a much more perfect manner than we do, without bodily organs. We have reaſon to believe, that there are other created beings endowed with powers of perception more perfect and more extenſive than ours, without any ſuch organs as we find neceſſary.

We ought not, therefore, to conclude, that ſuch bodily organs are, in their own nature, neceſſary to perception; but rather, that, by the will of God, our power of perceiving external objects is limited and circumſcribed by our organs of ſenſe; ſo that we perceive objects in a certain manner, and in certain circumſtances, and in no other.

If a man was ſhut up in a dark room, ſo that he could ſee nothing but through one ſmall hole in the ſhutter of a window, Would he conclude, that the hole was the cauſe of his ſeeing, and that it is impoſſible to ſee any other way? Perhaps, if he had never in his life ſeen but in this way, he might be apt to think ſo; but the concluſion is raſh and groundleſs. He ſees, becauſe God has given him the power of ſeeing; and he ſees only through this ſmall hole, becauſe his power of ſeeing is circumſcribed by impediments on all other hands.

Another neceſſary caution in this matter is, that we ought not to confound the organs of perception with the being that perceives. Perception muſt be the act of ſome being that perceives. The eye

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CHAP. I. is not that which ſees; it is only the organ by which we ſee. The ear is not that which hears; but the organ by which we hear; and ſo of the reſt.

A man cannot ſee the Satellites of Jupiter but by a teleſcope. Does he conclude from this, that it is the teleſcope that ſees thoſe ſtars? By no means; ſuch a concluſion would be abſurd. It is no leſs abſurd to conclude, that it is the eye that ſees, or the ear that hears. The teleſcope is an artificial organ of ſight, but it ſees not. The eye is a natural organ of ſight, by which we ſee; but the natural organ ſees as little as the artificial.

The eye is a machine moſt admirably contrived for refracting the rays of light, and forming a diſtinct picture of objects upon the retina; but it ſees neither the object nor the picture. It can form the picture after it is taken out of the head; but no viſion enſues. Even when it is in its proper place, and perfectly ſound, it is well known that an obſtruction in the optic nerve takes away viſion, though the eye has performed all that belongs to it.

If any thing more were neceſſary to be ſaid on a point ſo evident, we might obſerve, that if the faculty of ſeeing were in the eye, that of hearing in the ear, and ſo of the other ſenſes, the neceſſary conſequence of this would be, that the thinking principle, which I call myſelf, is not one, but many. But this is contrary to the irreſiſtible conviction of every man. When I ſay, I ſee, I hear, I feel, I remember, this implies that it is one and the ſame ſelf that performs all theſe operations; and as it would be abſurd to ſay, that my memory, another man's imagination, and a third man's reaſon, may make one individual intelligent being, it would be equally abſurd to ſay, that one piece of matter ſeeing, another hearing, and a third feeling, may make one and the ſame percipient being.

Theſe ſentiments are not new; they have occurred to thinking men from early ages. CICERO, in his Tuſculan Queſtions, lib. i. chap.

chap. 20. has expreſſed them very diſtinctly. Thoſe who chuſe, may conſult the paſſage.

CHAP. II.

Of the Impreſſions on the Organs, Nerves, and Brains.

A Second law of our nature regarding perception is, that we perceive no object, unleſs ſome impreſſion is made upon the organ of ſenſe, either by the immediate application of the object, or by ſome medium which paſſes between the object and the organ.

In two of our ſenſes, to wit, *touch* and *taſte*, there muſt be an immediate application of the object to the organ. In the other three, the object is perceived at a diſtance, but ſtill by means of a medium, by which ſome impreſſion is made upon the organ.

The effluvia of bodies drawn into the noſtrils with the breath, are the medium of ſmell; the undulations of the air, are the medium of hearing; and the rays of light paſſing from viſible objects to the eye, are the medium of ſight. We ſee no object, unleſs rays of light come from it to the eye. We hear not the ſound of any body, unleſs the vibrations of ſome elaſtic medium, occaſioned by the tremulous motion of the ſounding body, reach our ear. We perceive no ſmell, unleſs the effluvia of the ſmelling body enter into the noſtrils. We perceive no taſte, unleſs the ſapid body be applied to the tongue, or ſome part of the organ of taſte. Nor do we perceive any tangible quality of a body, unleſs it touch the hands, or ſome part of our bodies.

Theſe are facts known from experience to hold univerſally and invariably, both in men and brutes. By this law of our nature, our powers of perceiving external objects are farther limited and circumſcribed. Nor can we give any other reaſon for this, than that

CHAP. II. that it is the will of our Maker, who knows beſt what powers, and what degrees of them, are ſuited to our ſtate. We were once in a ſtate, I mean in the womb, wherein our powers of perception were more limited than in the preſent, and, in a future ſtate, they may be more enlarged.

It is likewiſe a law of our nature, that, in order to our perceiving objects, the impreſſions made upon the organs of ſenſe muſt be communicated to the nerves, and by them to the brain. This is perfectly known to thoſe who know any thing of anatomy.

The nerves are fine cords, which paſs from the brain, or from the ſpinal marrow, which is a production of the brain, to all parts of the body, dividing into ſmaller branches as they proceed, until at laſt they eſcape our eye-ſight: And it is found by experience that all the voluntary and involuntary motions of the body are performed by their means. When the nerves that ſerve any limb, are cut, or tied hard, we have then no more power to move that limb than if it was no part of the body.

As there are nerves that ſerve the muſcular motions, ſo there are others that ſerve the ſeveral ſenſes; and as without the former we cannot move a limb, ſo without the latter we can have no perception.

This train of machinery the wiſdom of God has made neceſſary to our perceiving objects. Various parts of the body concur to it, and each has its own function. *Firſt*, the object either immediately, or by ſome medium, muſt make an impreſſion on the organ. The organ ſerves only as a medium, by which an impreſſion is made on the nerve; and the nerve ſerves as a medium to make an impreſſion upon the brain. Here the material part ends; at leaſt we can trace it no farther; the reſt is all intellectual.

The proof of theſe impreſſions upon the nerves and brain in perception

perception is this, That, from many obſervations and experiments, it is found, that when the organ of any ſenſe is perfectly ſound, and has the impreſſion made upon it by the object ever ſo ſtrongly; yet, if the nerve which ſerves that organ be cut or tied hard, there is no perception: And it is well known that diſorders in the brain deprive us of the power of perception when both the organ and its nerve are ſound.

There is therefore ſufficient reaſon to conclude, that, in perception, the object produces ſome change in the organ; that the organ produces ſome change upon the nerve; and that the nerve produces ſome change in the brain. And we give the name of an *impreſſion* to thoſe changes, becauſe we have not a name more proper to expreſs, in a general manner, any change produced in a body, by an external cauſe, without ſpecifying the nature of that change. Whether it be preſſure, or attraction, or repulſion, or vibration, or ſomething unknown, for which we have no name, ſtill it may be called an impreſſion. But, with regard to the particular kind of this change or impreſſion, Philoſophers have never been able to diſcover any thing at all.

But, whatever be the nature of thoſe impreſſions upon the organs, nerves, and brain, we perceive nothing without them. Experience informs that it is ſo; but we cannot give a reaſon why it is ſo. In the conſtitution of man, perception, by fixed laws of nature, is connected with thoſe impreſſions; but we can diſcover no neceſſary connection. The Supreme Being has ſeen fit to limit our power of perception; ſo that we perceive not without ſuch impreſſions; and this is all we know of the matter.

This, however, we have reaſon to conclude in general, that as the impreſſions on the organs, nerves, and brain, correſpond exactly to the nature and conditions of the objects by which they are made; ſo our perceptions and ſenſations correſpond to thoſe impreſſions, and vary in kind, and in degree, as they vary.

CHAP. II. Without this exact correſpondence, the information we receive by our ſenſes would not only be imperfect, as it undoubtedly is, but would be fallacious, which we have no reaſon to think it is.

CHAP. III.

Hypotheſes concerning the Nerves and Brain.

WE are informed by Anatomiſts, that although the two coats which incloſe a nerve, and which it derives from the coats of the brain, are tough and elaſtic; yet the nerve itſelf has a very ſmall degree of conſiſtence, being almoſt like marrow. It has, however, a fibrous texture, and may be divided and ſubdivided, till its fibres eſcape our ſenſes: And as we know ſo very little about the texture of the nerves, there is great room left for thoſe who chuſe to indulge themſelves in conjecture.

The ancients conjectured that the nervous fibres are fine tubes, filled with a very ſubtile ſpirit or vapour, which they called *animal ſpirits*. That the brain is a gland, by which the animal ſpirits are ſecreted from the finer part of the blood, and their continual waſte repaired; and that it is by theſe animal ſpirits that the nerves perform their functions. DES CARTES has ſhown how, by theſe animal ſpirits going and returning in the nerves, muſcular motion, perception, memory, and imagination, are effected. All this he has deſcribed as diſtinctly as if he had been an eye-witneſs of all thoſe operations. But it happens, that the tubular ſtructure of the nerves was never perceived by the human eye, nor ſhewn by the niceſt injections; and all that has been ſaid about animal ſpirits through more than fifteen centuries, is mere conjecture.

Dr BRIGGS, who was Sir ISAAC NEWTON'S maſter in anatomy, was the firſt, as far as I know, who advanced a new ſyſtem concerning

cerning the nerves. He conceived them to be ſolid filaments of prodigious tenuity; and this opinion, as it accords better with obſervation, ſeems to have been more generally received ſince his time. As to the manner of performing their office, Dr BRIGGS thought, that, like muſical cords, they have vibrations differing according to their length and tenſion. They ſeem, however, very unfit for this purpoſe, on account of their want of tenacity, their moiſture, and being through their whole length in contact with moiſt ſubſtances: So that, although Dr BRIGGS wrote a book upon this ſyſtem, called *Nova Viſionis Theoria*, it ſeems not to have been much followed. CHAP. III.

Sir ISAAC NEWTON, in all his philoſophical writings, took great care to diſtinguiſh his doctrines, which he pretended to prove by juſt induction, from his conjectures, which were to ſtand or fall, according as future experiments and obſervations ſhould eſtabliſh or refute them. His conjectures he has put in the form of queries, that they might not be received as truths, but be enquired into, and determined according to the evidence to be found for or againſt them. Thoſe who miſtake his queries for a part of his doctrine, do him great injuſtice, and degrade him to the rank of the common herd of Philoſophers, who have in all ages adulterated philoſophy, by mixing conjecture with truth, and their own fancies with the oracles of Nature. Among other queries, this truly great Philoſopher propoſed this, Whether there may not be an elaſtic medium, or æther, immenſely more rare than air, which pervades all bodies, and which is the cauſe of gravitation; of the refraction and reflection of the rays of light; of the tranſmiſſion of heat, through ſpaces void of air; and of many other phænomena? In the 23d query ſubjoined to his Optics, he puts this queſtion, with regard to the impreſſions made on the nerves and brain in perception, Whether viſion is effected chiefly by the vibrations of this medium, excited in the bottom of the eye by the rays of light, and propagated along the ſolid, pellucid, and uniform capillaments of the optic nerve? And whether hearing is effected

CHAP. III. fected by the vibrations of this or ſome other medium, excited by the tremor of the air in the auditory nerves, and propagated along the ſolid, pellucid, and uniform capillaments of theſe nerves? And ſo with regard to the other ſenſes.

What NEWTON only propoſed as a matter to be enquired into, Dr HARTLEY conceived to have ſuch evidence, that, in his *Obſervations on Man*, he has deduced, in a mathematical form, a very ample ſyſtem concerning the faculties of the mind, from the doctrine of vibrations, joined with that of aſſociation.

His notion of the vibrations, excited in the nerves, is expreſſed in propoſitions 4. and 5. of the firſt part of his Obſervations on Man. "Propoſition 4. External objects impreſſed on the ſenſes, "occaſion firſt in the nerves on which they are impreſſed, and "then in the brain, vibrations of the ſmall, and, as one may ſay, "infiniteſimal medullary particles. Prop. 5. The vibrations men- "tioned in the laſt propoſition are excited, propagated, and kept "up, partly by the æther, that is, by a very ſubtile elaſtic fluid; "partly by the uniformity, continuity, ſoftneſs, and active powers "of the medullary ſubſtance of the brain, ſpinal marrow, and "nerves."

The modeſty and diffidence with which Dr HARTLEY offers his ſyſtem to the world, by deſiring his reader "to expect nothing "but hints and conjectures in difficult and obſcure matters, and "a ſhort detail of the principal reaſons and evidences in thoſe that "are clear; by acknowledging, that he ſhall not be able to execute, "with any accuracy, the proper method of philoſophiſing, recom- "mended and followed by Sir ISAAC NEWTON; and that he will "attempt a ſketch only for the benefit of future enquirers," ſeem to forbid any criticiſm upon it. One cannot, without reluctance, criticiſe what is propoſed in ſuch a manner, and with ſo good intention; yet, as the tendency of this ſyſtem of vibrations is to make all the operations of the mind mere mechaniſm, dependent on

on the laws of matter and motion; and as it has been held forth by its votaries, *as in a manner demonſtrated*, I ſhall make ſome remarks on that part of the ſyſtem which relates to the impreſſions made on the nerves and brain in perception. CHAP. III.

It may be obſerved in general, that Dr HARTLEY's work conſiſts of a chain of propoſitions, with their proofs and corollaries, digeſted in good order, and in a ſcientific form. A great part of them, however, are, as he candidly acknowledges, conjectures and hints only; yet theſe are mixed with the propoſitions legitimately proved, without any diſtinction. Corollaries are drawn from them, and other propoſitions grounded upon them, which, all taken together, make up a ſyſtem. A ſyſtem of this kind reſembles a chain, of which ſome links are abundantly ſtrong, others very weak. The ſtrength of the chain is determined by that of the weakeſt links; for if they give way, the whole falls to pieces, and the weight, ſupported by it, falls to the ground.

Philoſophy has been in all ages adulterated by hypotheſes; that is, by ſyſtems built partly on facts, and much upon conjecture. It is pity that a man of Dr HARTLEY's knowledge and candour ſhould have followed the multitude in this fallacious tract, after expreſſing his approbation of the proper method of philoſophiſing, pointed out by BACON and NEWTON. The laſt conſidered it as a reproach, when his ſyſtem was called his hypotheſis; and ſays, with diſdain of ſuch imputation, *Hypotheſes non fingo*. And it is very ſtrange that Dr HARTLEY ſhould not only follow ſuch a method of philoſophiſing himſelf, but that he ſhould direct others in their enquiries to follow it. So he does in Propoſition 87. Part 1. where he deduces rules for the aſcertainment of truth, from the rule of falſe, in arithmetic, and from the art of decyphering; and in other places.

As to the vibrations and vibratiuncles, whether of an elaſtic æther, or of the infiniteſimal particles of the brain and nerves, there may

CHAP. III. may be ſuch things for what we know; and men may rationally enquire whether they can find any evidence of their exiſtence; but while we have no proof of their exiſtence, to apply them to the ſolution of phænomena, and to build a ſyſtem upon them, is, what I conceive, we call, building a caſtle in the air.

When men pretend to account for any of the operations of nature, the cauſes aſſigned by them ought, as Sir ISAAC NEWTON has taught us, to have two conditions, otherwiſe they are good for nothing. *Firſt*, They ought to be true, to have a real exiſtence, and not to be barely conjectured to exiſt without proof. *Secondly*, They ought to be ſufficient to produce the effect.

As to the exiſtence of vibratory motions in the medullary ſubſtance of the nerves and brain, the evidence produced is this: *Firſt*, It is obſerved, that the ſenſations of ſeeing and hearing, and ſome ſenſations of touch, have ſome ſhort duration and continuance. *Secondly*, Though there be no direct evidence that the ſenſations of taſte and ſmell, and the greater part of theſe of touch, have the like continuance; yet, ſays the author, analogy would incline one to believe that they muſt reſemble the ſenſations of ſight and hearing in this particular. *Thirdly*, The continuance of all our ſenſations being thus eſtabliſhed, it follows, that external objects impreſs vibratory motions on the medullary ſubſtance of the nerves and brain; becauſe no motion, beſides a vibratory one, can reſide in any part for a moment of time.

This is the chain of proof, in which the firſt link is ſtrong, being confirmed by experience; the ſecond is very weak; and the third ſtill weaker. For other kinds of motion, beſides that of vibration, may have ſome continuance, ſuch as rotation, bending or unbending of a ſpring, and perhaps others which we are unacquainted with; nor do we know whether it is motion that is produced in the nerves, it may be preſſure, attraction, repulſion, or ſomething we do not know. This indeed is the common refuge of all hypotheſes,

theſes, that we know no other way in which the phænomena may be produced, and therefore they muſt be produced in this way. There is therefore no proof of vibrations in the infiniteſimal particles of the brain and nerves.

It may be thought that the exiſtence of an elaſtic vibrating æther ſtands on a firmer foundation, having the authority of Sir ISAAC NEWTON. But it ought to be obſerved, that although this great man had formed conjectures about this æther near fifty years before he died, and had it in his eye during that long ſpace as a ſubject of enquiry; yet it does not appear that he ever found any convincing proof of its exiſtence, but conſidered it to the laſt as a queſtion whether there be ſuch an æther or not. In the premonition to the reader, prefixed to the ſecond edition of his Optics, *anno* 1717, he expreſſes himſelf thus with regard to it: "Leſt any "one ſhould think that I place gravity among the eſſential proper- "ties of bodies, I have ſubjoined one queſtion concerning its "cauſe; a queſtion, I ſay, for I do not hold it as a thing eſta- "bliſhed." If, therefore, we regard the authority of Sir ISAAC NEWTON, we ought to hold the exiſtence of ſuch an æther as a matter not eſtabliſhed by proof, but to be examined into by experiments; and I have never heard that, ſince his time, any new evidence has been found of its exiſtence.

But, ſays Dr HARTLEY, "ſuppoſing the exiſtence of the æther, "and of its properties, to be deſtitute of all direct evidence, ſtill, "if it ſerves to account for a great variety of phænomena, it will "have an indirect evidence in its favour by this means." There never was an hypotheſis invented by an ingenious man which has not this evidence in its favour. The Vortices of DES CARTES, the Sylphs and Gnomes of Mr POPE, ſerve to account for a great variety of phænomena.

When a man has, with labour and ingenuity, wrought up an hypotheſis into a ſyſtem, he contracts a fondneſs for it, which is apt to

CHAP. III.

to warp the beſt judgment. This, I humbly think, appears remarkably in Dr HARTLEY. In his preface, he declares his approbation of the method of philoſophiſing recommended and followed by Sir ISAAC NEWTON; but having firſt deviated from this method in his practice, he is brought at laſt to juſtify this deviation in theory, and to bring arguments in defence of a method diametrically oppoſite to it. "We admit, ſays he, the key of a cypher "to be a true one, when it explains the cypher completely." I anſwer, To find the key requires an underſtanding equal or ſuperior to that which made the cypher. This inſtance, therefore, will then be in point, when he who attempts to decypher the works of nature by an hypotheſis, has an underſtanding equal or ſuperior to that which made them. The votaries of hypotheſes have often been challenged to ſhew one uſeful diſcovery in the works of nature that was ever made in that way. If inſtances of this kind could be produced, we ought to conclude that Lord BACON and Sir ISAAC NEWTON have done great diſſervice to philoſophy, by what they have ſaid againſt hypotheſes. But if no ſuch inſtance can be produced, we muſt conclude, with thoſe great men, that every ſyſtem which pretends to account for the phænomena of nature by hypotheſes or conjecture, is ſpurious and illegitimate, and ſerves only to flatter the pride of man with a vain conceit of knowledge which he has not attained.

The author tells us, "that any hypotheſis that has ſo much "plauſibility as to explain a conſiderable number of facts, helps "us to digeſt theſe facts in proper order, to bring new ones to light, "and to make *experimenta crucis* for the ſake of future enquirers."

Let hypotheſes be put to any of theſe uſes as far as they can ſerve. Let them ſuggeſt experiments, or direct our enquiries; but let juſt induction alone govern our belief.

"The rule of falſe affords an obvious and ſtrong inſtance of "the poſſibility of being led, with preciſion and certainty, to a

true

" true conclusion from a false position. And it is of the very es- CHAP. III.
" sence of algebra, to proceed in the way of supposition."

This is true; but, when brought to justify the accounting for natural phænomena by hypotheses, is foreign to the purpose. When an unknown number, or any unknown quantity is sought, which must have certain conditions, it may be found in a scientific manner by the rule of false, or by an algebraical analysis; and, when found, may be synthetically demonstrated to be the number or the quantity sought, by its answering all the conditions required. But it is one thing to find a quantity which shall have certain conditions; it is a very different thing to find out the laws by which it pleases God to govern the world and produce the phænomena which fall under our observation. And we can then only allow some weight to this argument in favour of hypotheses, when it can be shewn that the cause of any one phænomenon in nature has been, or can be found, as an unknown quantity is, by the rule of false, or by algebraical analysis. This, I apprehend, will never be, till the æra arrives, which Dr HARTLEY seems to foretell, " When future generations shall put all kinds of evidences " and enquiries into mathematical forms; and, as it were, reduce " ARISTOTLE's ten Categories, and Bishop WILKIN's forty *Summa* " *Genera* to the head of quantity alone, so as to make mathematics, " and logic, natural history, and civil history, natural philoso- " phy, and philosophy of all other kinds coincide *omni ex parte*."

Since Sir ISAAC NEWTON laid down the rules of philosophising in our enquiries into the works of Nature, many Philosophers have deviated from them in practice; perhaps few have paid that regard to them which they deserve. But they have met with very general approbation, as being founded in reason, and pointing out the only path to the knowledge of Nature's works. Dr HARTLEY is the only author I have met with who reasons against them, and has taken pains to find out arguments in defence of the exploded method of hypothesis.

CHAP. III. Another condition which Sir ISAAC NEWTON requires in the cauſes of natural things aſſigned by Philoſophers, is, that they be ſufficient to account for the phænomena. Vibrations, and vibratiuncles of the medullary ſubſtance of the nerves and brain, are aſſigned by Dr HARTLEY to account for all our ſenſations and ideas, and, in a word, for all the operations of our minds. Let us conſider very briefly how far they are ſufficient for that purpoſe.

It would be injuſtice to this author to conceive him a Materialiſt. He propoſes his ſentiments with great candour, and they ought not to be carried beyond what his words expreſs. He thinks it a conſequence of his theory, that matter, if it can be endued with the moſt ſimple kinds of ſenſation, might arrive at all that intelligence of which the human mind is poſſeſſed. He thinks that his theory overturns all the arguments that are uſually brought for the immateriality of the ſoul, from the ſubtilty of the internal ſenſes, and of the rational faculty; but he does not take upon him to determine whether matter can be endued with ſenſation or no. He even acknowledges, that matter and motion, however ſubtilly divided and reaſoned upon, yield nothing more than matter and motion ſtill; and therefore he would not be any way interpreted ſo as to oppoſe the immateriality of the ſoul.

It would, therefore, be unreaſonable to require that his theory of vibrations ſhould, in the proper ſenſe, account for our ſenſations. It would, indeed, be ridiculous in any man to pretend that thought of any kind muſt neceſſarily reſult from motion, or that vibrations in the nerves muſt neceſſarily produce thought, any more than the vibrations of a pendulum. Dr HARTLEY diſclaims this way of thinking, and therefore it ought not to be imputed to him. All that he pretends is, that, in the human conſtitution, there is a certain connection between vibrations in the medullary ſubſtance of the nerves and brain, and the thoughts of the mind; ſo that the laſt depend entirely upon the firſt, and every kind of thought

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in the mind ariſes in conſequence of a correſponding vibration, or vibratiuncle in the nerves and brain. Our ſenſations ariſe from vibrations, and our ideas from vibratiuncles, or miniature vibrations; and he comprehends, under theſe two words of *ſenſations* and *ideas*, all the operations of the mind. CHAP. III.

But how can we expect any proof of the connection between vibrations and thought, when the exiſtence of ſuch vibrations was never proved? The proof of their connection cannot be ſtronger than the proof of their exiſtence: For as the author acknowledges, that we cannot infer the exiſtence of the thoughts from the exiſtence of the vibrations, it is no leſs evident, that we cannot infer the exiſtence of vibrations from the exiſtence of our thoughts. The exiſtence of both muſt be known before we can know their connection. As to the exiſtence of our thoughts, we have the evidence of conſciouſneſs; a kind of evidence that never was called in queſtion. But as to the exiſtence of vibrations in the medullary ſubſtance of the nerves and brain, no proof has yet been brought.

All therefore we have to expect from this hypotheſis, is, that, in vibrations conſidered abſtractly, there ſhould be a variety in kind and degree, which tallies ſo exactly with the varieties of the thoughts they are to account for, as may lead us to ſuſpect ſome connection between the one and the other. If the diviſions and ſubdiviſions of thought be found to run parallel with the diviſions and ſubdiviſions of vibrations, this would give that kind of plauſibility to the hypotheſis of their connection, which we commonly expect even in a mere hypotheſis; but we do not find even this.

For, to omit all thoſe thoughts and operations which the author comprehends under the name of *ideas*, and which he thinks are connected with vibratiuncles; to omit the perception of external objects, which he comprehends under the name of *ſenſations*; to omit the ſenſations, properly ſo called, which accompany our paſ-

CHAP. III. ſions and affections, and to confine ourſelves to the ſenſations which we have by means of our external ſenſes, we can perceive no correſpondence between the variety we find in their kinds and degrees, and that which may be ſuppoſed in vibrations.

We have five ſenſes, whoſe ſenſations differ totally in kind. By each of theſe, excepting perhaps that of hearing, we have a variety of ſenſations, which differ ſpecifically, and not in degree only. How many taſtes and ſmells are there which are ſpecifically different, each of them capable of all degrees of ſtrength and weakneſs? Heat and cold, roughneſs and ſmoothneſs, hardneſs and ſoftneſs, pain and pleaſure, are ſenſations of touch that differ in kind, and each has an endleſs variety of degrees. Sounds have the qualities of acute and grave, loud and low, with all different degrees of each. The varieties of colour are many more than we have names to expreſs. How ſhall we find varieties in vibrations correſponding to all this variety of ſenſations which we have by our five ſenſes only?

I know two qualities of vibrations in an uniform elaſtic medium, and I know no more. They may be quick or ſlow in various degrees, and they may be ſtrong or weak in various degrees; but I cannot find any diviſion of our ſenſations that will make them tally with thoſe diviſions of vibrations. If we had no other ſenſations but thoſe of hearing, the theory would anſwer well; for ſounds are either acute or grave, which may anſwer to quick or ſlow vibrations; or they are loud or low, which anſwer to ſtrong or weak vibrations. But then we have no variety of vibrations correſponding to the immenſe variety of ſenſations which we have by ſight, ſmell, taſte, and touch.

Dr HARTLEY has endeavoured to find out other two qualities of vibrations; to wit, that they may primarily affect one part of the brain or another, and that they may vary in their direction, according as they enter by different external nerves; but theſe

ſeem

ſeem to be added to make a number: For, as far as we know, vibrations in an uniform elaſtic ſubſtance ſpread over the whole, and in all directions. However, that we may be liberal, we ſhall grant him four different kinds of vibrations, each of them having as many degrees as he pleaſes. Can he or any man reduce all our ſenſations to four kinds? We have five ſenſes, and by each of them a variety of ſenſations, more than ſufficient to exhauſt all the varieties we are able to conceive in vibrations.

Dr HARTLEY, indeed, was ſenſible of the difficulty of finding vibrations to ſuit all the variety of our ſenſations. His extenſive knowledge of phyſiology and pathology could yield him but a feeble aid; and therefore he is often reduced to the neceſſity of heaping ſuppoſition upon ſuppoſition, conjecture upon conjecture, to give ſome credibility to his hypotheſis; and, in ſeeking out vibrations which may correſpond with the ſenſations of one ſenſe, he ſeems to forget that thoſe muſt be omitted which have been appropriated to another.

Philoſophers have accounted in ſome degree for our various ſenſations of ſound, by the vibrations of elaſtic air. But it is to be obſerved, *firſt*, That we know that ſuch vibrations do really exiſt; and, *ſecondly*, That they tally exactly with the moſt remarkable phænomena of ſound. We cannot, indeed, ſhow how any vibration ſhould produce the ſenſation of ſound. This muſt be reſolved into the will of God, or into ſome cauſe altogether unknown. But we know, that as the vibration is ſtrong or weak, the ſound is loud or low. We know, that as the vibration is quick or ſlow, the ſound is acute or grave. We can point out that relation of ſynchronous vibrations which produces harmony or diſcord, and that relation of ſucceſſive vibrations which produces melody: And all this is not conjectured, but proved by a ſufficient induction. This account of ſounds, therefore, is philoſophical; although, perhaps, there may be many things relating to ſound that we cannot account for, and of which the cauſes remain latent. The connections deſcribed

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If any thing ſimilar to this could be ſhown in accounting for all our ſenſations by vibrations in the medullary ſubſtance of the nerves and brain, it would deſerve a place in ſound philoſophy. But, when we are told of vibrations in a ſubſtance, which no man could ever prove to have vibrations, or to be capable of them; when ſuch imaginary vibrations are brought to account for all our ſenſations, though we can perceive no correſpondence in their variety of kind and degree to the variety of ſenſations, the connections deſcribed in ſuch a ſyſtem are the creatures of human imagination, not the work of God.

The rays of light make an impreſſion upon the optic nerves; but they make none upon the auditory or olfactory. The vibrations of the air make an impreſſion upon the auditory nerves; but none upon the optic or the olfactory. The effluvia of bodies make an impreſſion upon the olfactory nerves; but make none upon the optic or auditory. No man has been able to give a ſhadow of reaſon for this. While this is the caſe, is it not better to confeſs our ignorance of the nature of thoſe impreſſions made upon the nerves and brain in perception, than to flatter our pride with the conceit of knowledge which we have not, and to adulterate philoſophy with the ſpurious brood of hypotheſes?

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Falſe Concluſions drawn from the Impreſſions before mentioned.

SOME Philoſophers among the ancients, as well as among the moderns, imagined that man is nothing but a piece of matter ſo curiouſly organiſed, that the impreſſions of external objects produce in it ſenſation, perception, remembrance, and all the other operations

tions we are conſcious of. This fooliſh opinion could only take its riſe from obſerving the conſtant connection which the Author of Nature hath eſtabliſhed between certain impreſſions made upon our ſenſes, and our perception of the objects by which the impreſſion is made; from which they weakly inferred, that thoſe impreſſions were the proper efficient cauſes of the correſponding perception.

But no reaſoning is more fallacious than this, that becauſe two things are always conjoined, therefore one muſt be the cauſe of the other. Day and night have been joined in a conſtant ſucceſſion ſince the beginning of the world; but who is ſo fooliſh as to conclude from this, that day is the cauſe of night, or night the cauſe of the following day? There is indeed nothing more ridiculous than to imagine that any motion or modification of matter ſhould produce thought.

If one ſhould tell of a teleſcope ſo exactly made as to have the power of ſeeing; of a whiſpering gallery that had the power of hearing; of a cabinet ſo nicely framed as to have the power of memory; or of a machine ſo delicate as to feel pain when it was touched; ſuch abſurdities are ſo ſhocking to common ſenſe that they would not find belief even among ſavages; yet it is the ſame abſurdity to think that the impreſſions of external objects upon the machine of our bodies, can be the real efficient cauſe of thought and perception.

Paſſing this therefore as a notion too abſurd to admit of reaſoning; another concluſion very generally made by Philoſophers, is, that in perception an impreſſion is made upon the mind as well as upon the organ, nerves, and brain. ARISTOTLE, as was before obſerved, thought that the form or image of the object perceived, enters by the organ of ſenſe, and ſtrikes upon the mind. Mr HUME gives the name of impreſſions to all our perceptions, to all our ſenſations, and even to the objects which we perceive. Mr LOCKE affirms very poſitively, that the ideas of external objects are produced

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ced in our minds by impulſe, "that being the only way we can "conceive bodies to operate in." It ought, however, to be obſerved, in juſtice to Mr LOCKE, that he retracted this notion in his firſt letter to the Biſhop of WORCESTER, and promiſed in the next edition of his Eſſay to have that paſſage rectified; but either, from forgetfulneſs in the author, or negligence in the printer, the paſſage remains in all the ſubſequent editions I have ſeen.

There is no prejudice more natural to man, than to conceive of the mind as having ſome ſimilitude to body in its operations. Hence men have been prone to imagine, that as bodies are put in motion by ſome impulſe or impreſſion made upon them by contiguous bodies; ſo the mind is made to think and to perceive by ſome impreſſion made upon it, or ſome impulſe given to it by contiguous objects. If we have ſuch a notion of the mind as HOMER had of his gods, who might be bruiſed or wounded with ſwords and ſpears, we may then underſtand what is meant by impreſſions made upon it by a body: But if we conceive the mind to be immaterial, of which I think we have very ſtrong proofs, we ſhall find it difficult to affix a meaning to *impreſſions made upon it.*

There is a figurative meaning of impreſſions on the mind which is well authoriſed, and of which we took notice in the obſervations made on that word; but this meaning applies only to objects that are intereſting. To ſay that an object which I ſee with perfect indifference makes an impreſſion upon my mind, is not, as I apprehend, good Engliſh. If Philoſophers mean no more but that I ſee the object, why ſhould they invent an improper phraſe to expreſs what every man knows how to expreſs in plain Engliſh?

But it is evident, from the manner in which this phraſe is uſed by modern Philoſophers, that they mean not barely to expreſs by it, my perceiving an object, but to explain the manner of perception. They think that the object perceived acts upon the mind, in ſome way ſimilar to that in which one body acts upon another, by making

king an impreſſion upon it. The impreſſion upon the mind is conceived to be ſomething wherein the mind is altogether paſſive, and has ſome effect produced in it by the object. But this is a hypotheſis which contradicts the common ſenſe of mankind, and which ought not to be admitted without proof.

When I look upon the wall of my room, the wall does not act at all, nor is capable of acting; the perceiving it is an act or operation in me. That this is the common apprehenſion of mankind with regard to perception, is evident from the manner of expreſſing it in all languages.

The vulgar give themſelves no trouble how they perceive objects, they expreſs what they are conſcious of, and they expreſs it with propriety; but Philoſophers have an avidity to know how we perceive objects; and conceiving ſome ſimilitude between a body that is put in motion, and a mind that is made to perceive, they are led to think, that as the body muſt receive ſome impulſe to make it move, ſo the mind muſt receive ſome impulſe or impreſſion to make it perceive. This analogy ſeems to be confirmed, by obſerving that we perceive objects only when they make ſome impreſſion upon the organs of ſenſe, and upon the nerves and brain; but it ought to be obſerved, that ſuch is the nature of body that it cannot change its ſtate, but by ſome force impreſſed upon it. This is not the nature of mind. All that we know about it ſhows it to be in its nature living and active, and to have the power of perception in its conſtitution, but ſtill within thoſe limits to which it is confined by the laws of Nature.

It appears, therefore, that this phraſe of the mind's having impreſſions made upon it by corporeal objects in perception, is either a phraſe without any diſtinct meaning, and contrary to the propriety of the Engliſh language, or it is grounded upon an hypotheſis which is deſtitute of proof. On that account, though we grant that in perception there is an impreſſion made upon the organ of

CHAP. IV. ſenſe, and upon the nerves and brain, we do not admit that the object makes any impreſſion upon the mind.

There is another concluſion drawn from the impreſſions made upon the brain in perception, which I conceive to have no ſolid foundation, though it has been adopted very generally by Philoſophers. It is, that by the impreſſions made on the brain, images are formed of the object perceived; and that the mind, being ſeated in the brain as its chamber of preſence, immediately perceives thoſe images only, and has no perception of the external object but by them. This notion of our perceiving external objects, not immediately, but in certain images or ſpecies of them conveyed by the ſenſes, ſeems to be the moſt ancient philoſophical hypotheſis we have on the ſubject of perception, and to have with ſmall variations retained its authority to this day.

ARISTOTLE, as was before obſerved, maintained, that the ſpecies, images or forms of external objects, coming from the object, are impreſſed on the mind. The followers of DEMOCRITUS and EPICURUS held the ſame thing, with regard to ſlender films of ſubtile matter coming from the object, that ARISTOTLE did with regard to his immaterial ſpecies or forms.

ARISTOTLE thought every object of human underſtanding enters at firſt by the ſenſes; and that the notions got by them are by the powers of the mind refined and ſpiritualized, ſo as at laſt to become objects of the moſt ſublime and abſtracted ſciences. PLATO, on the other hand, had a very mean opinion of all the knowledge we get by the ſenſes. He thought it did not deſerve the name of knowledge, and could not be the foundation of ſcience; becauſe the objects of ſenſe are individuals only, and are in a conſtant fluctuation. All ſcience, according to him, muſt be employed about thoſe eternal and immutable ideas, which exiſted before the objects of ſenſe, and are not liable to any change. In this there was an eſſential difference between the ſyſtems of theſe two Philoſophers.

ſophers. The notion of eternal and immutable ideas, which PLATO borrowed from the Pythagorean ſchool, was totally rejected by ARISTOTLE, who held it as a maxim, that there is nothing in the intellect, which was not at firſt in the ſenſes.

But, notwithſtanding this great difference in thoſe two ancient ſyſtems, they might both agree as to the manner in which we perceive objects by our ſenſes: And that they did ſo, I think, is probable; becauſe ARISTOTLE, as far as I know, neither takes notice of any difference between himſelf and his maſter upon this point, nor lays claim to his theory of the manner of our perceiving objects as his own invention. It is ſtill more probable from the hints which PLATO gives in the ſeventh book of his Republic, concerning the manner in which we perceive the objects of ſenſe; which he compares to perſons in a deep and dark cave, who ſee not external objects themſelves but only their ſhadows, by a light let into the cave through a ſmall opening.

It ſeems, therefore, probable that the Pythagoreans and Platoniſts agreed with the Peripatetics in this general theory of perception; to wit, that the objects of ſenſe are perceived only by certain images, or ſhadows of them, let into the mind, as into a *camera obſcura*.

The notions of the ancients were very various with regard to the ſeat of the ſoul. Since it has been diſcovered, by the improvements in anatomy, that the nerves are the inſtruments of perception, and of the ſenſations accompanying it, and that the nerves ultimately terminate in the brain, it has been the general opinion of Philoſophers that the brain is the ſeat of the ſoul; and that ſhe perceives the images that are brought there, and external things only by means of them.

DES CARTES, obſerving that the pineal gland is the only part of the brain that is ſingle, all the other parts being double, and thinking that the ſoul muſt have one ſeat, was determined by this

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to make that gland the ſoul's habitation, to which, by means of the animal ſpirits, intelligence is brought of all objects that affect the ſenſes.

Others have not thought proper to confine the habitation of the ſoul to the pineal gland, but to the brain in general, or to ſome part of it, which they call the *ſenſorium*. Even the great NEWTON favoured this opinion, though he propoſes it only as a query, with that modeſty which diſtinguiſhed him no leſs than his great genius. "Is not, ſays he, the ſenſorium of animals the place where "the ſentient ſubſtance is preſent, and to which the ſenſible ſpe- "cies of things are brought through the nerves and brain, that "there they may be perceived by the mind preſent in that place? "And is there not an incorporeal, living, intelligent, and omni- "preſent Being, who, in infinite ſpace, as if it were in his ſenſo- "rium, intimately perceives things themſelves, and comprehends "them perfectly, as being preſent to them; of which things, that "principle in us, which perceives and thinks, diſcerns only, in "its little ſenſorium, the images brought to it through the organs "of the ſenſes?"

His great friend Dr SAMUEL CLARKE adopted the ſame ſentiment with more confidence. In his papers to LEIBNITZ, we find the following paſſages: "Without being preſent to the images of the "things perceived, it (the ſoul) could not poſſibly perceive them. "A living ſubſtance can only there perceive where it is preſent, "either to the things themſelves, (as the omnipreſent God is to "the whole univerſe), or to the images of things, (as the ſoul of "man is in its proper ſenſory). Nothing can any more act, or "be acted upon, where it is not preſent, than it can be where it "is not. We are ſure the ſoul cannot perceive what it is not pre- "ſent to, becauſe nothing can act, or be acted upon, where it "is not."

Mr LOCKE expreſſes himſelf ſo upon this point, that, for the moſt

moſt part, one would imagine, that he thought that the ideas, or images of things, which he believed to be the immediate objects of perception, are impreſſions upon the mind itſelf; yet, in ſome paſſages, he rather places them in the brain, and makes them to be perceived by the mind there preſent. "There are ſome ideas, ſays "he, which have admittance only through one ſenſe; and if the "organs or the nerves, which are the conduits to convey them "from without to their audience in the brain, the mind's preſence "room, if I may ſo call it, are ſo diſordered as not to perform "their function, they have no poſtern to be admitted by.

"There ſeems to be a conſtant decay of all our ideas, even of "thoſe that are ſtruck deepeſt. The pictures drawn in our minds "are laid in fading colours. Whether the temper of the brain "makes this difference, that in ſome it retains the characters "drawn on it like marble, in others like free-ſtone, and in others "little better than ſand, I ſhall not enquire."

From theſe paſſages of Mr LOCKE, and others of a like nature, it is plain, that he thought that there are images of external objects conveyed to the brain. But whether he thought with DES CARTES and NEWTON, that the images in the brain are perceived by the mind there preſent, or that they are imprinted on the mind itſelf, is not ſo evident.

Now, with regard to this hypotheſis, there are three things that deſerve to be conſidered, becauſe the hypotheſis leans upon them; and, if any one of them fail, it muſt fall to the ground. The *firſt* is, That the ſoul has its ſeat, or, as Mr LOCKE calls it, its preſence room in the brain. The *ſecond*, That there are images formed in the brain of all the objects of ſenſe. The *third*, That the mind or ſoul perceives theſe images in the brain; and that it perceives not external objects immediately, but only perceives them by means of thoſe images.

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As to the *firſt* point, that the ſoul has its ſeat in the brain, this, ſurely, is not ſo well eſtabliſhed, as that we can ſafely build other principles upon it. There have been various opinions and much diſputation about the place of ſpirits; whether they have a place? and if they have, how they occupy that place? After men had fought in the dark about theſe points for ages, the wiſer part ſeem to have left off diſputing about them, as matters beyond the reach of the human faculties.

As to the *ſecond* point, that images of all the objects of ſenſe are formed in the brain, we may venture to affirm, that there is no proof nor probability of this, with regard to any of the objects of ſenſe; and that with regard to the greater part of them, it is words without any meaning.

We have not the leaſt evidence that the image of any external object is formed in the brain. The brain has been diſſected times innumerable by the niceſt Anatomiſts; every part of it examined by the naked eye, and with the help of microſcopes; but no veſtige of an image of any external object was ever found. The brain ſeems to be the moſt improper ſubſtance that can be imagined for receiving or retaining images, being a ſoft moiſt medullary ſubſtance.

But how are theſe images formed? or whence do they come? Says Mr LOCKE, the organs of ſenſe and nerves convey them from without. This is juſt the Ariſtotelian hypotheſis of ſenſible ſpecies, which modern Philoſophers have been at great pains to refute, and which muſt be acknowledged to be one of the moſt unintelligible parts of the Peripatetic ſyſtem. Thoſe who conſider ſpecies of colour, figure, ſound, and ſmell, coming from the object, and entering by the organs of ſenſe, as a part of the ſcholaſtic jargon, long ago diſcarded from ſound philoſophy, ought to have diſcarded images in the brain along with them. There never was a ſhadow of argument brought by any author, to ſhow that an image

image of any external object ever entered by any of the organs of ſenſe. CHAP. IV.

That external objects make ſome impreſſion on the organs of ſenſe, and by them on the nerves and brain, is granted; but that thoſe impreſſions reſemble the objects they are made by, ſo as that they may be called images of the objects, is moſt improbable. Every hypotheſis that has been contrived ſhews that there can be no ſuch reſemblance; for neither the motions of animal ſpirits, nor the vibrations of elaſtic chords, or of elaſtic æther, or of the infiniteſimal particles of the nerves, can be ſuppoſed to reſemble the objects by which they are excited.

We know, that, in viſion, an image of the viſible object is formed in the bottom of the eye by the rays of light. But we know alſo, that this image cannot be conveyed to the brain, becauſe the optic nerve, and all the parts that ſurround it, are opaque and impervious to the rays of light; and there is no other organ of ſenſe in which any image of the object is formed.

It is farther to be obſerved, that, with regard to ſome objects of ſenſe, we may underſtand what is meant by an image of them imprinted on the brain; but, with regard to moſt objects of ſenſe, the phraſe is abſolutely unintelligible, and conveys no meaning at all. As to objects of ſight, I underſtand what is meant by an image of their figure in the brain: But how ſhall we conceive an image of their colour where there is abſolute darkneſs? And as to all other objects of ſenſe, except figure and colour, I am unable to conceive what is meant by an image of them. Let any man ſay, what he means by an image of heat and cold, an image of hardneſs or ſoftneſs, an image of ſound, or ſmell, or taſte. The word *image*, when applied to theſe objects of ſenſe, has abſolutely no meaning. Upon what a weak foundation, then, does this hypotheſis ſtand, when it ſuppoſes, that images of all the objects of ſenſe

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are imprinted on the brain, being conveyed thither by the conduits of the organs and nerves.

The *third* point in this hypotheſis, is, That the mind perceives the images in the brain, and external objects only by means of them. This is as improbable, as that there are ſuch images to be perceived. If our powers of perception be not altogether fallacious, the objects we perceive are not in our brain, but without us. We are ſo far from perceiving images in the brain, that we do not perceive our brain at all; nor would any man ever have known that he had a brain, if anatomy had not diſcovered, by diſſection, that the brain is a conſtituent part of the human body.

To ſum up what has been ſaid with regard to the organs of perception, and the impreſſions made upon our nerves and brain. It is a law of our nature, eſtabliſhed by the will of the Supreme Being, that we perceive no external object but by means of the organs given us for that purpoſe. But theſe organs do not perceive. The eye is the organ of ſight, but it ſees not. A teleſcope is an artificial organ of ſight. The eye is a natural organ of ſight, but it ſees as little as the teleſcope. We know how the eye forms a picture of the viſible object upon the retina; but how this picture makes us ſee the object we know not; and if experience had not informed us that ſuch a picture is neceſſary to viſion, we ſhould never have known it. We can give no reaſon why the picture on the retina ſhould be followed by viſion, while a like picture on any other part of the body produces nothing like viſion.

It is likewiſe a law of our nature, that we perceive not external objects, unleſs certain impreſſions be made by the object upon the organ, and by means of the organ upon the nerves and brain. But of the nature of thoſe impreſſions we are perfectly ignorant; and though they are conjoined with perception by the will of our Maker, yet it does not appear that they have any neceſſary connection with it in their own nature, far leſs that they can be the

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proper efficient cauſe of it. We perceive, becauſe God has given us the power of perceiving, and not becauſe we have impreſſions from objects. We perceive nothing without thoſe impreſſions, becauſe our Maker has limited and circumſcribed our powers of perception, by ſuch laws of Nature as to his wiſdom ſeemed meet, and ſuch as ſuited our rank in his creation.

CHAP. V.

Of Perception.

IN ſpeaking of the impreſſions made on our organs in perception, we build upon facts borrowed from anatomy and phyſiology, for which we have the teſtimony of our ſenſes. But being now to ſpeak of perception itſelf, which is ſolely an act of the mind, we muſt appeal to another authority. The operations of our minds are known not by ſenſe, but by conſciouſneſs, the authority of which is as certain and as irreſiſtible as that of ſenſe.

In order, however, to our having a diſtinct notion of any of the operations of our own minds, it is not enough that we be conſcious of them, for all men have this conſciouſneſs: It is farther neceſſary that we attend to them while they are exerted, and reflect upon them with care, while they are recent and freſh in our memory. It is neceſſary that, by employing ourſelves frequently in this way, we get the habit of this attention and reflection; and therefore, for the proof of facts which I ſhall have occaſion to mention upon this ſubject, I can only appeal to the reader's own thoughts, whether ſuch facts are not agreeable to what he is conſcious of in his own mind.

If, therefore, we attend to that act of our mind which we call the perception of an external object of ſenſe, we ſhall find in it

CHAP. V. theſe three things. *Firſt*, Some conception or notion of the object perceived. *Secondly*, A ſtrong and irreſiſtible conviction and belief of its preſent exiſtence. And, *thirdly*, That this conviction and belief are immediate, and not the effect of reaſoning.

Firſt, It is impoſſible to perceive an object without having ſome notion or conception of that which we perceive. We may indeed conceive an object which we do not perceive; but when we perceive the object, we muſt have ſome conception of it at the ſame time; and we have commonly a more clear and ſteady notion of the object while we perceive it, than we have from memory or imagination when it is not perceived. Yet, even in perception, the notion which our ſenſes give of the object may be more or leſs clear, more or leſs diſtinct, in all poſſible degrees.

Thus we ſee more diſtinctly an object at a ſmall than at a great diſtance. An object at a great diſtance is ſeen more diſtinctly in a clear than in a foggy day. An object ſeen indiſtinctly with the naked eye, on account of its ſmallneſs, may be ſeen diſtinctly with a microſcope. The objects in this room will be ſeen by a perſon in the room leſs and leſs diſtinctly as the light of the day fails; they paſs through all the various degrees of diſtinctneſs according to the degrees of the light, and at laſt, in total darkneſs, they are not ſeen at all. What has been ſaid of the objects of ſight is ſo eaſily applied to the objects of the other ſenſes, that the application may be left to the reader.

In a matter ſo obvious to every perſon capable of reflection, it is neceſſary only farther to obſerve, that the notion which we get of an object, merely by our external ſenſe, ought not to be confounded with that more ſcientific notion which a man, come to the years of underſtanding, may have of the ſame object, by attending to its various attributes, or to its various parts, and their relation to each other, and to the whole. Thus the notion which a child has of a jack for roaſting meat, will be acknowledged to be very

very different from that of a man who underſtands its conſtruction, and perceives the relation of the parts to one another, and to the whole. The child ſees the jack and every part of it as well as the man: The child, therefore, has all the notion of it which ſight gives; whatever there is more in the notion which the man forms of it, muſt be derived from other powers of the mind, which may afterwards be explained. This obſervation is made here only, that we may not confound the operations of different powers of the mind, which, by being always conjoined after we grow up to underſtanding, are apt to paſs for one and the ſame. CHAP. V.

Secondly, In perception we not only have a notion more or leſs diſtinct of the object perceived, but alſo an irreſiſtible conviction and belief of its exiſtence. This is always the caſe when we are certain that we perceive it. There may be a perception ſo faint and indiſtinct, as to leave us in doubt whether we perceive the object or not. Thus, when a ſtar begins to twinkle as the light of the ſun withdraws, one may, for a ſhort time, think he ſees it, without being certain, until the perception acquires ſome ſtrength and ſteadineſs. When a ſhip juſt begins to appear in the utmoſt verge of the horizon, we may at firſt be dubious whether we perceive it or not: But when the perception is in any degree clear and ſteady, there remains no doubt of its reality; and when the reality of the perception is aſcertained, the exiſtence of the object perceived can no longer be doubted.

By the laws of all nations, in the moſt ſolemn judicial trials wherein mens fortunes and lives are at ſtake, the ſentence paſſes according to the teſtimony of eye or ear witneſſes of good credit. An upright judge will give a fair hearing to every objection that can be made to the integrity of a witneſs, and allow it to be poſſible that he may be corrupted; but no judge will ever ſuppoſe, that witneſſes may be impoſed upon by truſting to their eyes and ears: And if a ſceptical counſel ſhould plead againſt the teſtimony of the witneſſes, that they had no other evidence for what they

CHAP. V. declared, but the teſtimony of their eyes and ears, and that we ought not to put ſo much faith in our ſenſes, as to deprive men of life or fortune upon their teſtimony; ſurely no upright judge would admit a plea of this kind. I believe no counſel, however ſceptical, ever dared to offer ſuch an argument; and, if it was offered, it would be rejected with diſdain.

Can any ſtronger proof be given, that it is the univerſal judgment of mankind that the evidence of ſenſe is a kind of evidence which we may ſecurely reſt upon in the moſt momentous concerns of mankind: That it is a kind of evidence againſt which we ought not to admit any reaſoning; and therefore, that to reaſon either for or againſt it is an inſult to common ſenſe?

The whole conduct of mankind, in the daily occurrences of life, as well as the ſolemn procedure of judicatories in the trial of cauſes civil and criminal, demonſtrates this. I know only of two exceptions that may be offered againſt this being the univerſal belief of mankind.

The firſt exception is that of ſome lunatics who have been perſuaded of things that ſeem to contradict the clear teſtimony of their ſenſes. It is ſaid there have been lunatics and hypochondriacal perſons, who ſeriouſly believed themſelves to be made of glaſs; and, in conſequence of this, lived in continual terror of having their brittle frame ſhivered into pieces.

All I have to ſay to this is, that our minds, in our preſent ſtate, are, as well as our bodies, liable to ſtrange diſorders; and as we do not judge of the natural conſtitution of the body, from the diſorders or diſeaſes to which it is ſubject from accidents, ſo neither ought we to judge of the natural powers of the mind from its diſorders, but from its ſound ſtate. It is natural to man, and common to the ſpecies, to have two hands and two feet; yet I have ſeen a man, and a very ingenious one, who was born without either

either hands or feet. It is natural to man to have faculties ſuperior to thoſe of brutes; yet we ſee ſome individuals, whoſe faculties are not equal to thoſe of many brutes; and the wiſeſt man may, by various accidents, be reduced to this ſtate. General rules that regard thoſe whoſe intellects are ſound, are not overthrown by inſtances of men whoſe intellects are hurt by any conſtitutional or accidental diſorder. CHAP. V.

The other exception that may be made to the principle we have laid down, is that of ſome Philoſophers who have maintained, that the teſtimony of ſenſe is fallacious, and therefore ought never to be truſted, Perhaps it might be a ſufficient anſwer to this to ſay, that there is nothing ſo abſurd which ſome Philoſophers have not maintained. It is one thing to profeſs a doctrine of this kind, another ſeriouſly to believe it, and to be governed by it in the conduct of life. It is evident, that a man who did not believe his ſenſes could not keep out of harm's way an hour of his life; yet, in all the hiſtory of philoſophy, we never read of any ſceptic that ever ſtepped into fire or water becauſe he did not believe his ſenſes, or that ſhowed in the conduct of life, leſs truſt in his ſenſes than other men have. This gives us juſt ground to apprehend, that philoſophy was never able to conquer that natural belief which men have in their ſenſes; and that all their ſubtile reaſonings againſt this belief were never able to perſuade themſelves.

It appears, therefore, that the clear and diſtinct teſtimony of our ſenſes carries irreſiſtible conviction along with it, to every man in his right judgment.

I obſerved, *thirdly*, That this conviction is not only irreſiſtible, but it is immediate; that is, it is not by a train of reaſoning and argumentation that we come to be convinced of the exiſtence of what we perceive; we aſk no argument for the exiſtence of the object, but that we perceive it; perception commands our belief upon

CHAP. V. upon its own authority, and diſdains to reſt its authority upon any reaſoning whatſoever.

The conviction of a truth may be irreſiſtible, and yet not immediate. Thus my conviction that the three angles of every plain triangle are equal to two right angles, is irreſiſtible, but it is not immediate: I am convinced of it by demonſtrative reaſoning. There are other truths in mathematics of which we have not only an irreſiſtible, but an immediate conviction. Such are the axioms. Our belief of the axioms in mathematics is not grounded upon argument. Arguments are grounded upon them, but their evidence is diſcerned immediately by the human underſtanding.

It is, no doubt, one thing to have an immediate conviction of a ſelf-evident axiom; it is another thing to have an immediate conviction of the exiſtence of what we ſee; but the conviction is equally immediate and equally irreſiſtible in both caſes. No man thinks of ſeeking a reaſon to believe what he ſees; and before we are capable of reaſoning, we put no leſs confidence in our ſenſes than after. The rudeſt ſavage is as fully convinced of what he ſees, and hears, and feels, as the moſt expert Logician. The conſtitution of our underſtanding determines us to hold the truth of a mathematical axiom as a firſt principle, from which other truths may be deduced, but it is deduced from none; and the conſtitution of our power of perception determines us to hold the exiſtence of what we diſtinctly perceive as a firſt principle, from which other truths may be deduced, but it is deduced from none. What has been ſaid of the irreſiſtible and immediate belief of the exiſtence of objects diſtinctly perceived, I mean only to affirm with regard to perſons ſo far advanced in underſtanding, as to diſtinguiſh objects of mere imagination from things which have a real exiſtence. Every man knows that he may have a notion of Don Quixote, or of Garagantua, without any belief that ſuch perſons ever exiſted; and that of Julius Cæſar and Oliver Cromwell, he has not only a notion, but a belief that they did really exiſt. But whether

whether children, from the time that they begin to uſe their ſenſes, CHAP. V.
make a diſtinction between things which are only conceived or imagined, and things which really exiſt, may be doubted. Until we are able to make this diſtinction, we cannot properly be ſaid to believe or to diſbelieve the exiſtence of any thing. The belief of the exiſtence of any thing ſeems to ſuppoſe a notion of exiſtence; a notion too abſtract perhaps to enter into the mind of an infant. I ſpeak of the power of perception in thoſe that are adult, and of a ſound mind, who believe that there are ſome things which do really exiſt; and that there are many things conceived by themſelves, and by others, which have no exiſtence. That ſuch perſons do invariably aſcribe exiſtence to every thing which they diſtinctly perceive, without ſeeking reaſons or arguments for doing ſo, is perfectly evident from the whole tenor of human life.

The account I have given of our perception of external objects, is intended as a faithful delineation of what every man come to years of underſtanding, and capable of giving attention to what paſſes in his own mind, may feel in himſelf. In what manner the notion of external objects, and the immediate belief of their exiſtence, is produced by means of our ſenſes, I am not able to ſhow, and I do not pretend to ſhow. If the power of perceiving external objects in certain circumſtances, be a part of the original conſtitution of the human mind, all attempts to account for it will be vain: No other account can be given of the conſtitution of things, but the will of him that made them; as we can give no reaſon why matter is extended and inert, why the mind thinks, and is conſcious of its thoughts, but the will of him who made both; ſo I ſuſpect we can give no other reaſon why, in certain circumſtances, we perceive external objects, and in others do not.

The Supreme Being intended, that we ſhould have ſuch knowledge of the material objects that ſurround us, as is neceſſary in order to our ſupplying the wants of nature, and avoiding the dangers to which we are conſtantly expoſed; and he has admirably fitted

CHAP. V. fitted our powers of percep[redacted] we have of external objects [redacted] greateſt part of men would [redacted] of men hardly ever learn to [redacted] no man can reaſon: There[redacted] that ſurround us, and from [redacted] or harm, is equally neceſſa[redacted] rant, and to the learned, G[redacted] way that puts all upon a le[redacted] as perfect, and gives as full conviction to the moſt ignorant, as to the moſt learned.

CHAP. VI.

What it is to account for a Phænomenon in Nature.

AN object placed at a proper diſtance, and in a good light, while the eyes are ſhut, is not perceived at all; but no ſooner do we open our eyes upon it, than we have, as it were by inſpiration, a certain knowledge of its exiſtence, of its colour, figure, and diſtance. This is a fact which every one knows. The vulgar are ſatisfied with knowing the fact, and give themſelves no trouble about the cauſe of it: But a Philoſopher is impatient to know how this event is produced, to account for it, or aſſign its cauſe.

This avidity to know the cauſes of things is the parent of all philoſophy true and falſe. Men of ſpeculation place a great part of their happineſs in ſuch knowledge. *Felix qui potuit rerum cognoſcere cauſas*, has always been a ſentiment of human nature. But as in the purſuit of other kinds of happineſs men often miſtake the road; ſo in none have they more frequently done it, than in the philoſophical purſuit of the cauſes of things.

It

It is a dictate of common ſenſe, that the cauſes we aſſign of appearances ought to be real, and not fictions of human imagination. It is likewiſe ſelf-evident, that ſuch cauſes ought to be adequate to the effects that are conceived to be produced by them.

That thoſe who are leſs accuſtomed to inquiries into the cauſes of natural appearances, may the better underſtand what it is to ſhew the cauſe of ſuch appearances, or to account for them; I ſhall borrow a plain inſtance of a phænomenon or appearance, of which a full and ſatisfactory account has been given. The phænomenon is this: That a ſtone, or any heavy body, falling from a height, continually increaſes its velocity as it deſcends; ſo that if it acquire a certain velocity in one ſecond of time, it will have twice that velocity at the end of two ſeconds, thrice at the end of three ſeconds, and ſo on in proportion to the time. This accelerated velocity in a ſtone falling muſt have been obſerved from the beginning of the world; but the firſt perſon, as far as we know, who accounted for it in a proper and philoſophical manner, was the famous GALILEO; after innumerable falſe and fictitious accounts had been given of it.

He obſerved, that bodies once put in motion continue that motion with the ſame velocity, and in the ſame direction, until they be ſtopped or retarded, or have the direction of their motion altered, by ſome force impreſſed upon them. This property of bodies is called their *inertia*, or inactivity; for it implies no more than that bodies cannot of themſelves change their ſtate from reſt to motion, or from motion to reſt. He obſerved alſo, that gravity acts conſtantly and equally upon a body, and therefore will give equal degrees of velocity to a body in equal times. From theſe principles, which are known from experience to be fixed laws of Nature, GALILEO ſhewed, that heavy bodies muſt deſcend with a velocity uniformly accelerated, as by experience they are found to do.

For if the body by its gravitation acquire a certain velocity at

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CHAP. VI.

the end of one ſecond, it wo
that moment, continue to g
tation continues, and will
velocity, equal to that whic
velocity at the end of two ſe
end of one. In like manner
the third ſecond, and havi
in any of the preceding, th
ſecond will be thrice as gre
continually.

We may here obſerve, that the cauſes aſſigned of this phæno-menon are two: *Firſt*, That bodies once put in motion retain their velocity and their direction until it is changed by ſome force impreſſed upon them. *Secondly*, That the weight or gravitation of a body is always the ſame. Theſe are laws of Nature, confirmed by univerſal experience, and therefore are not feigned but true cauſes; then, they are preciſely adequate to the effect aſcribed to them; they muſt neceſſarily produce that very motion in deſcend-ing bodies which we find to take place; and neither more nor leſs. The account therefore given of this phænomenon is juſt and philoſophical; no other will ever be required or admitted by thoſe who underſtand this.

It ought likewiſe to be obſerved, that the cauſes aſſigned of this phænomenon are things of which we can aſſign no cauſe. Why bodies once put in motion continue to move; why bodies conſtantly gravitate towards the earth with the ſame force, no man has been able to ſhow: Theſe are facts confirmed by univerſal experience, and they muſt no doubt have a cauſe; but their cauſe is unknown, and we call them laws of Nature, becauſe we know no cauſe of them but the will of the Supreme Being.

But may we not attempt to find the cauſe of gravitation, and of other phænomena which we call laws of Nature? No doubt we may.

may. We know not the limit which has been ſet to human knowledge, and our knowledge of the works of God can never be carried too far: But, ſuppoſing gravitation to be accounted for, by an æthereal elaſtic medium for inſtance, this can only be done, *firſt*, by proving the exiſtence and the elaſticity of this medium; and, *ſecondly*, by ſhowing, that this medium muſt neceſſarily produce that gravitation which bodies are known to have. Until this be done, gravitation is not accounted for, nor is its cauſe known; and when this is done, the elaſticity of this medium will be conſidered as a law of Nature, whoſe cauſe is unknown. The chain of natural cauſes has, not unfitly, been compared to a chain hanging down from heaven: A link that is diſcovered ſupports the links below it, but it muſt itſelf be ſupported; and that which ſupports it muſt be ſupported, until we come to the firſt link, which is ſupported by the throne of the Almighty. Every natural cauſe muſt have a cauſe, until we aſcend to the firſt cauſe, which is uncauſed, and operates not by neceſſity but by will.

By what has been ſaid in this Chapter, thoſe who are but little acquainted with philoſophical inquiries may ſee what is meant by accounting for a phænomenon, or ſhowing its cauſe, which ought to be well underſtood, in order to judge of the theories by which Philoſophers have attempted to account for our perception of external objects by the ſenſes.

CHAP. VII.

Sentiments of Philoſophers about the Perception of external Objects; and, firſt,

Of the Theory of Father MALEBRANCHE.

HOW the correſpondence is carried on between the thinking principle within us, and the material world without us, has always been found a very difficult problem to thoſe Philoſophers

CHAP. VII. who think themſelves oblige
nature. Many Philoſophers
their invention to diſcover
objects by our ſenſes: And
mity in their ſentiments in
tions in particular points.

PLATO illuſtrates our man
in this manner: He ſuppoſe
men lie bound in ſuch a manner, that they can direct their eyes only to one part of the cave: Far behind, there is a light, ſome rays of which come over a wall to that part of the cave which is before the eyes of our priſoners. A number of perſons, variouſly employed, paſs between them and the light, whoſe ſhadows are ſeen by the priſoners, but not the perſons themſelves.

In this manner, that Philoſopher conceived, that, by our ſenſes, we perceive the ſhadows of things only, and not things themſelves. He ſeems to have borrowed his notions on this ſubject from the Pythagoreans, and they very probably from PYTHAGORAS himſelf. If we make allowance for PLATO's allegorical genius, his ſentiments on this ſubject correſpond very well with thoſe of his ſcholar ARISTOTLE, and of the Peripatetics. The ſhadows of PLATO may very well repreſent the ſpecies and phantaſms of the Peripatetic ſchool, and the ideas and impreſſions of modern Philoſophers.

Two thouſand years after PLATO, Mr LOCKE, who ſtudied the operations of the human mind ſo much, and with ſo great ſucceſs, repreſents our manner of perceiving external objects, by a ſimilitude very much reſembling that of the cave. "Methinks, ſays "he, the underſtanding is not much unlike a cloſet wholly ſhut "from light, with only ſome little opening left, to let in external "viſible reſemblances or ideas of things without. Would the pic-"tures coming into ſuch a dark room but ſtay there, and lie ſo "orderly as to be found upon occaſion, it would very much re-

"ſemble

"ſemble the underſtanding of a man, in reference to all objects of ſight, and the ideas of them." CHAP. VII.

PLATO's ſubterranean cave, and Mr LOCKE's dark cloſet, may be applied with eaſe to all the ſyſtems of perception that have been invented: For they all ſuppoſe that we perceive not external objects immediately, and that the immediate objects of perception are only certain ſhadows of the external objects. Thoſe ſhadows or images, which we immediately perceive, were by the ancients called *ſpecies*, *forms*, *phantaſms*. Since the time of DES CARTES, they have commonly been called *ideas*, and by Mr HUME *impreſſions*. But all Philoſophers, from PLATO to Mr HUME, agree in this, That we do not perceive external objects immediately, and that the immediate object of perception muſt be ſome image preſent to the mind. So far there appears an unanimity, rarely to be found among Philoſophers on ſuch abſtruſe points.

If it ſhould be aſked, Whether, according to the opinion of Philoſophers, we perceive the images or ideas only, and infer the exiſtence and qualities of the external object from what we perceive in the image? Or, whether we really perceive the external object as well as its image? The anſwer to this queſtion is not quite obvious.

On the one hand, Philoſophers, if we except BERKELEY and HUME, believe the exiſtence of external objects of ſenſe, and call them objects of perception, though not immediate objects. But what they mean by a mediate object of perception I do not find clearly explained; whether they ſuit their language to popular opinion, and mean that we perceive external objects in that figurative ſenſe, in which we ſay that we perceive an abſent friend when we look on his picture; or whether they mean, that really, and without a figure, we perceive both the external object and its idea in the mind. If the laſt be their meaning, it would follow, that, in every inſtance of perception, there is a double object perceived:

CHAP. VII. ceived: That I perceive, fo
another in my own mind.
and as it contradicts the ex
pute it to them.

It ſeems, therefore, that
perceive the external object,
they ſpeak of perceiving ex
popular or in a figurative
ſons lead me to think this
what is mentioned above. *Firſt*, If we do really perceive the external object itſelf, there ſeems to be no neceſſity, no uſe, for an image of it. *Secondly*, Since the time of DES CARTES, Philoſophers have very generally thought that the exiſtence of external objects of ſenſe requires proof, and can only be proved from the exiſtence of their ideas. *Thirdly*, The way in which Philoſophers ſpeak of ideas, ſeems to imply that they are the only objects of perception.

Having endeavoured to explain what is common to Philoſophers in accounting for our perception of external objects, we ſhall give ſome detail of their differences.

The ideas by which we perceive external objects, are ſaid by ſome to be the ideas of the Deity; but it has been more generally thought, that every man's ideas are proper to himſelf, and are either in his mind, or in his *ſenſorium*, where the mind is immediately preſent. The *firſt* is the theory of MALEBRANCHE; the *ſecond* we ſhall call the common theory.

With regard to that of MALEBRANCHE, it ſeems to
affinity with the Platonic notion of ideas, but is no
PLATO believed that there are three eternal firſt prin
which all things have their origin; matter, ideas, and
cauſe. Matter is that of which all things are made, w

the ancient Philoſophers, was conceived to be eternal. Ideas are CHAP. VII.
forms without matter of every kind of things which can exiſt; which forms were alſo conceived by PLATO to be eternal and immutable, and to be the models or patterns by which the efficient cauſe, that is the Deity, formed every part of this Univerſe. Theſe ideas were conceived to be the ſole objects of ſcience, and indeed of all true knowledge. While we are impriſoned in the body, we are prone to give attention to the objects of ſenſe only; but theſe being individual things, and in a conſtant fluctuation, being indeed ſhadows rather than realities, cannot be the object of real knowledge. All ſcience is employed, not about individual things, but about things univerſal and abſtract from matter. Truth is eternal and immutable, and therefore muſt have for its object eternal and immutable ideas; theſe we are capable of contemplating in ſome degree even in our preſent ſtate, but not without a certain purification of mind, and abſtraction from the objects of ſenſe. Such, as far as I am able to comprehend, were the ſublime notions of PLATO, and probably of PYTHAGORAS.

The Philoſophers of the Alexandrian ſchool, commonly called the latter Platoniſts, ſeem to have adopted the ſame ſyſtem; but with this difference, that they made the eternal ideas not to be a principle diſtinct from the Deity, but to be in the divine intellect, as the objects of thoſe conceptions which the divine mind muſt from all eternity have had, not only of every thing which he has made, but of every poſſible exiſtence, and of all the relations of things: By a proper purification and abſtraction from the objects of ſenſe, we may be in ſome meaſure united to the Deity, and in the eternal light be enabled to diſcern the moſt ſublime intellectual truths.

Theſe Platonic notions, grafted upon Chriſtianity, probably gave riſe to the ſect called *Myſtics*, which, though in its ſpirit and principles extremely oppoſite to the Peripatetic, yet was never extinguiſhed, but ſubſiſts to this day.

Many

CHAP. VII.

Many of the Fathers of
the tenets of the Alexandria
But it does not appear, a
the latter Platoniſts, or St
that we perceive the obje
had too mean a notion
aſcribe to it ſo high an
perceiving the objects of
be the invention of Father
brings many paſſages of
ſeems very deſirous to have that Father of his party. But in thoſe paſſages, though the Father ſpeaks in a very high ſtrain of God's being the light of our minds, of our being illuminated immediately by the eternal light, and uſes other ſimilar expreſſions; yet he ſeems to apply thoſe expreſſions only to our illumination in moral and divine things, and not to the perception of objects by the ſenſes. Mr BAYLE imagines that ſome traces of this opinion of MALEBRANCHE are to be found in AMELIUS the Platoniſt, and even in DEMOCRITUS; but his authorities ſeem to be ſtrained.

MALEBRANCHE, with a very penetrating genius, entered into a more minute examination of the powers of the human mind, than any one before him. He had the advantage of the diſcoveries made by DES CARTES, whom he followed without ſlaviſh attachment.

He lays it down as a principle admitted by all Philoſophers, and which could not be called in queſtion, that we do
external objects immediately, but by means of image
them preſent to the mind. "I ſuppoſe, ſays he, th
"will grant that we perceive not the objects that a
"immediately, and of themſelves. We ſee the ſun,
"an infinity of objects without us; and it is not at
"the ſoul ſallies out of the body, and, as it were,
"through the heavens to contemplate all thoſe obje

"them not, therefore, by themſelves; and the immediate object "of the mind, when it ſees the ſun, for example, is not the ſun, "but ſomething which is intimately united to the ſoul; and it is "that which I call an idea: So that by the word *idea*, I underſtand "nothing elſe here but that which is the immediate object, or "neareſt to the mind, when we perceive any object. It ought to "be carefully obſerved, that, in order to the mind's perceiving "any object, it is abſolutely neceſſary that the idea of that object "be actually preſent to it. Of this it is not poſſible to doubt. "The things which the ſoul perceives are of two kinds. They "are either in the ſoul, or they are without the ſoul: Thoſe that "are in the ſoul are its own thoughts, that is to ſay, all its dif-"ferent modifications. The ſoul has no need of ideas for perceiving "theſe things. But with regard to things without the ſoul, "we cannot perceive them but by means of ideas."

Having laid this foundation, as a principle common to all Philoſophers, and which admits of no doubt, he proceeds to enumerate all the poſſible ways by which the ideas of ſenſible objects may be preſented to the mind: Either, *firſt*, they come from the bodies which we perceive; or, *ſecondly*, the ſoul has the power of producing them in itſelf; or, *thirdly*, they are produced by the Deity, either in our creation, or occaſionally as there is uſe for them; or, *fourthly*, the ſoul has in itſelf virtually and eminently, as the ſchools ſpeak, all the perfections which it perceives in bodies; or, *fifthly*, the ſoul is united with a Being poſſeſſed of all perfection, who has in himſelf the ideas of all created things.

This he takes to be a complete enumeration of all the poſſible ways in which the ideas of external objects may be preſented to our minds: He employs a whole chapter upon each; refuting the four firſt, and confirming the laſt by various arguments. The Deity, being always preſent to our minds in a more intimate manner than any other being, may, upon occaſion of the impreſſions made on our bodies, diſcover to us as far as he thinks proper, and

CHAP. VII. according to fixed laws [redacted] ſee all things in God [redacted]

However viſionary [redacted] yet when we conſider [redacted] ſophers in conceiving [redacted] tion, and that he fou[redacted] ties, in every other [redacted] ſo wonderful that a [redacted] and probably it pl[redacted] the moſt ſtriking li[redacted] nual preſence with [redacted]

He diſtinguiſhed, more accurately than any Philoſopher had done before, the objects which we perceive from the ſenſations in our own minds, which, by the laws of Nature, always accompany the perception of the object. As in many things, ſo particularly in this, he has great merit: For this, I apprehend, is a key that opens the way to a right underſtanding both of our external ſenſes, and of other powers of the mind. The vulgar confound ſenſation with other powers of the mind, and with their objects, becauſe the purpoſes of life do not make a diſtinction neceſſary. The confounding of theſe in common language has led Philoſophers, in one period, to make thoſe things external which really are ſenſations in our own minds; and, in another period, running as is [redacted] the contrary extreme, to make every thing almoſt to be [redacted] or feeling in our minds.

It is obvious, that the ſyſtem of MALEBRANCHE lea[redacted] dence of the exiſtence of a material world, from what [redacted] by our ſenſes; for the divine ideas, which are the obje[redacted] diately perceived, were the ſame before the world wa[redacted] MALEBRANCHE was too acute not to diſcern this con[redacted] his ſyſtem, and too candid not to acknowledge it: He [redacted] it, and endeavours to make advantage of it, reſting th[redacted]

evidence we have of the existence of matter upon the authority of revelation: He shews, that the arguments brought by DES CARTES to prove the existence of a material world, though as good as any that reason could furnish, are not perfectly conclusive; and though he acknowledges with DES CARTES, that we feel a strong propensity to believe the existence of a material world, yet he thinks this is not sufficient; and that to yield to such propensities without evidence, is to expose ourselves to perpetual delusion. He thinks, therefore, that the only convincing evidence we have of the existence of a material world is, that we are assured by revelation that God created the heavens and the earth, and that the Word was made flesh: He is sensible of the ridicule to which so strange an opinion may expose him among those who are guided by prejudice; but, for the sake of truth, he is willing to bear it. But no author, not even Bishop BERKELEY, hath shown more clearly, that, either upon his own system, or upon the common principles of Philosophers with regard to ideas, we have no evidence left, either from reason or from our senses, of the existence of a material world. It is no more than justice to Father MALEBRANCHE to acknowledge, that Bishop BERKELEY's arguments are to be found in him in their whole force.

Mr NORRIS, an English divine, espoused the system of MALEBRANCHE, in his Essay towards the theory of the ideal or intellectual world, published in two volumes 8*vo*, *anno* 1701. This author has made a feeble effort to supply a defect which is to be found not in MALEBRANCHE only, but in almost all the authors who have treated of ideas; I mean, to prove their existence. He has employed a whole chapter to prove, that material things cannot be an immediate object of perception. His arguments are these: *1st*, They are without the mind, and therefore there can be no union between the object and the perception. *2dly*, They are disproportioned to the mind, and removed from it by the whole diameter of being. *3dly*, Because, if material objects were immediate objects of perception, there could be no physical science;

CHAP. VII. things neceſſary and immu[illegible] the only objects of [illegible] *4thly*, If material things were perceived by themſelves, they would be a true light to our minds, [illegible] the intelligible [illegible] of our underſtandings, and conſequently perfective of them, [illegible] ſuperior to them.

MALEBRANCHE's ſyſtem was adopted by [illegible] people in France of both ſexes; but it ſeems to have [illegible] currency in other countries. Mr LOCKE [illegible] it, which is found among his poſthumous works. But whether it was written in haſte, or after the vigour of his [illegible] was impaired by age, there is leſs of ſtrength and ſolidity [illegible] than in moſt of his writings. The moſt formidable antagoniſt MALEBRANCHE met with was in his own country; ANTONY ARNAULD, doctor of the Sorbonne, and one of the acuteſt writers the Janſeniſts have to boaſt of, though that ſect has produced many. MALEBRANCHE was a Jeſuit, and the antipathy between the Jeſuits and Janſeniſts left him no room to expect quarter from his learned antagoniſt. Thoſe who chuſe to ſee this ſyſtem, attacked on the one hand, and defended on the other, with ſubtilty of argument, and elegance of expreſſion, and on the part of ARNAULD with much wit and humour, may find ſatisfaction by reading MALEBRANCHE's Enquiry after truth; ARNAULD's book of true and falſe ideas; MALEBRANCHE's Defence; and ſome ſubſequent replies and defences. In controverſies of this kind, the aſſailant commonly has the advantage, if they are not unequally matched; for it is eaſier to overturn all the theories of Philoſophers upon this ſubject, than to defend any one of them. Mr BAYLE makes a very juſt remark upon this controverſy, that the arguments of Mr ARNAULD [illegible] the ſyſtem of MALEBRANCHE were often unanſwerable [illegible] were capable of being retorted againſt his own ſyſtem [illegible] ingenious antagoniſt knew well how to uſe this defence [illegible]

CHAP. VIII.

Of the common Theory of Perception, and of the Sentiments of the PERIPATETICS, *and of* DES CARTES.

THIS theory in general is, that we perceive external objects only by certain images which are in our minds, or in the ſenſorium to which the mind is immediately preſent. Philoſophers in different ages have differed both in the names they have given to thoſe images, and in their notions concerning them. It would be a laborious taſk to enumerate all their variations, and perhaps would not requite the labour. I ſhall only give a ſketch of the principal differences with regard to their names and their nature.

By ARISTOTLE and the Peripatetics, the images preſented to our ſenſes were called *ſenſible ſpecies or forms*; thoſe preſented to the memory or imagination were called *phantaſms*; and thoſe preſented to the intellect were called *intelligible ſpecies*; and they thought, that there can be no perception, no imagination, no intellection, without ſpecies or phantaſms. What the ancient Philoſophers called ſpecies, ſenſible and intelligible, and phantaſms, in later times, and eſpecially ſince the time of DES CARTES, came to be called by the common name of *ideas*. The Carteſians divided our ideas into three claſſes, thoſe of *ſenſation*, of *imagination*, and of *pure intellection*. Of the objects of ſenſation and imagination, they thought the images are in the brain, but of objects that are incorporeal, the images are in the underſtanding, or pure intellect.

Mr LOCKE, taking the word *idea* in the ſame ſenſe as DES CARTES had done before him, to ſignify whatever is meant by phantaſm, notion or ſpecies, divides ideas into thoſe of *ſenſation*, and thoſe of *reflection*; meaning by the firſt, the ideas of all corporeal objects, whether perceived, remembered, or imagined; by the ſecond, the ideas

CHAP. VIII. ideas of the powers and op
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gard to the name of thoſe internal images of objects of ſenſe, which they hold to be the immediate objects of perception.

We ſhall next give a ſhort detail of the ſentiments of the Peripatetics and Carteſians, of LOCKE, BERKELEY, and HUME, concerning them.

ARISTOTLE ſeems to have thought that the ſoul conſiſts of two parts, or, rather, that we have two ſouls, the animal and the rational; or, as he calls them, the ſoul and the intellect. To the *firſt*, belong the ſenſes, memory, and imagination; to the *laſt*, judgment, opinion, belief, and reaſoning. The firſt we have in common with brute animals; the laſt is peculiar to man. The animal ſoul he held to be a certain form of the body, which is inſeparable from it, and periſhes at death. To this ſoul the ſenſes belong: And he defines a ſenſe to be that which is capable of receiving the ſenſible forms, or ſpecies of objects, without any of the matter of them; as wax receives the form of the ſe
of the matter of it. The forms of ſound, of colour
of other ſenſible qualities, are in like manner receive

It ſeems to be a neceſſary conſequence of ARIS
trine, that bodies are conſtantly ſending forth, in a

many different kinds of forms without matter as they have different ſenſible qualities; for the forms of colour muſt enter by the eye, the forms of ſound by the ear, and ſo of the other ſenſes. This accordingly was maintained by the followers of ARISTOTLE, though, not as far as I know, expreſsly mentioned by himſelf. They diſputed concerning the nature of thoſe forms of ſpecies, whether they were real beings or non-entities; and ſome held them to be of an intermediate nature between the two. The whole doctrine of the Peripatetics and ſchoolmen concerning forms, ſubſtantial and accidental, and concerning the tranſmiſſion of ſenſible ſpecies from objects of ſenſe to the mind, if it be at all intelligible, is ſo far above my comprehenſion, that I ſhould perhaps do it injuſtice, by entering into it more minutely. MALEBRANCHE, in his *Recherche de la Verité*, has employed a chapter to ſhew, that material objects do not ſend forth ſenſible ſpecies of their ſeveral ſenſible qualities.

The great revolution which DES CARTES produced in philoſophy, was the effect of a ſuperiority of genius, aided by the circumſtances of the times. Men had, for more than a thouſand years, looked up to ARISTOTLE as an oracle in philoſophy. His authority was the teſt of truth. The ſmall remains of the Platonic ſyſtem were confined to a few Myſtics, whoſe principles and manner of life drew little attention. The feeble attempts of RAMUS, and of ſome others, to make improvements in the ſyſtem, had little effect. The Peripatetic doctrines were ſo interwoven with the whole ſyſtem of ſcholaſtic theology, that to diſſent from ARISTOTLE was to alarm the Church. The moſt uſeful and intelligible parts, even of ARISTOTLE's writings, were neglected, and philoſophy was become an art of ſpeaking learnedly, and diſputing ſubtilely, without producing any invention of uſe in human life. It was fruitful of words, but barren of works, and admirably contrived for drawing a veil over human ignorance, and putting a ſtop to the progreſs of knowledge, by filling men with a conceit that they knew every thing. It was very fruitful alſo in controverſies;

CHAP. VIII. verſies; but for the moſt
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doubt of the dogmas of ARISTOTLE, as well as of the decrees of
Popes. The moſt important ſtep in the reformation of religion was to deſtroy the claim of infallibility, which hindered men from uſing their judgment in matters of religion: And the moſt important ſtep in the reformation of philoſophy was to deſtroy the authority, of which ARISTOTLE had ſo long had peaceable poſſeſſion. The laſt had been attempted by Lord BACON and others, with no leſs zeal than the firſt by LUTHER and CALVIN.

DES CARTES knew well the defects of the prevailing ſyſtem which had begun to loſe its authority. His genius enabled him, and his ſpirit prompted him, to attempt a new one. He had applied much to the mathematical ſciences, and had made conſiderable improvement in them. He wiſhed to introduce that perſpicuity and evidence into other branches of philoſophy which he found in them.

Being ſenſible how apt we are to be led aſtr
education, he thought the only way to avoid e
to doubt of every thing, and hold every thi
even thoſe things which he had been taught
tain, until he had ſuch clear and cogent evide
aſſent.

In this ſtate of univerſal doubt, that which firſt appeared to him to be clear and certain, was his own exiſtence. Of this he was certain, becauſe he was conſcious that he thought, that he reaſoned, and that he doubted. He uſed this argument, therefore, to prove his own exiſtence, *cogito, ergo ſum.* This he conceived to be the firſt of all truths, the foundation-ſtone upon which the whole fabric of human knowledge is built, and on which it muſt reſt. And as ARCHIMEDES thought, that if he had one fixed point to reſt his engines upon, he could move the earth; ſo DES CARTES, charmed with the diſcovery of one certain principle, by which he emerged from the ſtate of univerſal doubt, believed that this principle alone would be a ſufficient foundation on which he might build the whole ſyſtem of ſcience. He ſeems therefore to have taken no great trouble to examine whether there might not be other firſt principles, which, on account of their own light and evidence, ought to be admitted by every man of ſound judgment. The love of ſimplicity, ſo natural to the mind of man, led him to apply the whole force of his mind to raiſe the fabric of knowledge upon this one principle, rather than ſeek a broader foundation.

Accordingly, he does not admit the evidence of ſenſe to be a firſt principle, as he does that of conſciouſneſs. The arguments of the ancient ſceptics here occurred to him, that our ſenſes often deceive us, and therefore ought never to be truſted on their own authority: That in ſleep, we often ſeem to ſee and hear things which we are convinced to have had no exiſtence. But that which chiefly led DES CARTES to think that he ought not to truſt to his ſenſes without proof of their veracity, was, that he took it for granted, as all Philoſophers had done before him, that he did not perceive external objects themſelves, but certain images of them in his own mind, called *ideas.* He was certain, by conſciouſneſs, that he had the ideas of ſun and moon, earth and ſea; but how could he be aſſured that there really exiſted external objects like to theſe ideas?

CHAP. VIII.

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culties he found in himſelf, are not fallacious, but may be truſted,
when a proper uſe is made of them.

The ſyſtem of DES CARTES is, with great perſpicuity and acuteneſs, explained by himſelf in his writings, which ought to be conſulted by thoſe who would underſtand it.

The merit of DES CARTES, cannot be eaſily conceived by thoſe who have not ſome notion of the Peripatetic ſyſtem, in which he was educated. To throw off the prejudices of education, and to create a ſyſtem of nature, totally different from that which had ſubdued the underſtanding of mankind, and kept it in ſubjection for ſo many centuries, required an uncommon force of mind.

The world which DES CARTES exhibits to our view, is not only in its ſtructure very different from that of the Peripatetics, but is, as we may ſay, compoſed of different materials.

In the old ſyſtem, every thing was, by a kind of metaphyſical ſublimation, reſolved into principles ſo myſterious, that it may be a queſtion whether they were words without meaning, or were notions too refined for human underſtanding.

All that we obſerve in nature, is, according to ARISTOTLE, a conſtant ſucceſſion of the operations of generation and corruption.

The

The principles of generation are matter and form. The principle of corruption is privation. All natural things are produced or generated by the union of matter and form; matter being, as it were, the mother, and form the father. As to matter, or the firſt matter, as it is called, it is neither ſubſtance nor accident; it has no quality or property; it is nothing actually, but every thing potentially. It has ſo ſtrong an appetite for form, that it is no ſooner diveſted of one form, than it is clothed with another, and is equally ſuſceptible of all forms ſucceſſively. It has no nature, but only the capacity of having any one. CHAP. VIII.

This is the account which the Peripatetics give of the firſt matter. The other principle of generation is *form*, *act*, *perfection*; for theſe three words ſignify the ſame thing. But we muſt not conceive form to conſiſt in the figure, ſize, arrangement, or motion of the parts of matter. Theſe, indeed, are accidental forms, by which things artificial are formed: But every production of Nature has a ſubſtantial form, which, joined to matter, makes it to be what it is. The ſubſtantial form is a kind of informing ſoul, which gives the thing its ſpecific nature, and all its qualities, powers, and activity. Thus the ſubſtantial form of heavy bodies, is that which makes them deſcend; of light bodies, that which makes them aſcend. The ſubſtantial form of gold, is that which gives it its ductility, its fuſibility, its weight, its colour, and all its qualities; and the ſame is to be underſtood of every natural production. A change in the accidental form of any body, is alteration only; but a change in the ſubſtantial form, is generation and corruption: It is corruption with reſpect to the ſubſtantial form, of which the body is deprived: It is generation, with reſpect to the ſubſtantial form that ſucceeds. Thus when a horſe dies and turns to duſt, the philoſophical account of the phænomenon is this: A certain portion of the *materia prima*, which was joined to the ſubſtantial form of a horſe, is deprived of it by privation, and in the ſame inſtant is inveſted with the ſubſtantial form of earth. As every ſubſtance muſt have a ſubſtantial form, there are ſome of

CHAP. VIII. thoſe forms inanimate, ſome rational. The three former kinds ... the laſt, according to the ſchoolmen, ... God, and infuſed into the body, ma... while they are united; yet capable of ... dy, and of ſubſiſting by itſelf.

Such are the principles of natural ... It retains ſo much of the ancient ... cannot aſcribe the invention of ... he no doubt made conſiderable ... probably the ſame in both ſyſtems ... eternal. They differed more about ... Platoniſts held forms or ideas, as they called them, to be eternal, immutable, and ſelf-exiſtent. ARISTOTLE maintained, that they were not eternal, nor ſelf-exiſtent. On the other hand, he did not allow them to be produced, but educed from matter; yet he held them not to be actually in the matter from which they are educed, but potentially only. But theſe two ſyſtems differed leſs from one another, than that of DES CARTES did from both.

In the world of DES CARTES, we meet with two kinds of beings only, to wit, body and mind; the firſt the object of our ſenſes, the other of conſciouſneſs; both of them things of which we have a diſtinct apprehenſion, if the human mind be capable of diſtinct apprehenſion at all. To the firſt, no qualities are aſcribed but extenſion, figure, and motion; to the laſt, nothing but thought, and its various modifications, of which we are conſcious. He could obſerve no common attribute, no reſembling feature in the attributes of body and mind, and therefore concluded them to be diſtinct ſubſtances, and totally of a different nature; and that body from its very nature is inanimate and inert, incapable of any kind of thought or ſenſation, or of ... in itſelf.

DES CARTES muſt be allowed the honour of being the firſt who drew a diſtinct line between the material and intellectual world, which, in all the old ſyſtems, were ſo blended together, that it was impoſſible to ſay where the one ends and the other begins. How much this diſtinction hath contributed to the improvements of modern times, in the philoſophy both of body and of mind, is not eaſy to ſay. CHAP. VIII.

One obvious conſequence of this diſtinction was, that accurate reflection on the operations of our own mind is the only way to make any progreſs in the knowledge of it. MALEBRANCHE, LOCKE, BERKELEY, and HUME, were taught this leſſon by DES CARTES; and to it we owe their moſt valuable diſcoveries in this branch of philoſophy. The analogical way of reaſoning concerning the powers of the mind from the properties of body, which is the ſource of almoſt all the errors on this ſubject, and which is ſo natural to the bulk of mankind, was as contrary to the principles of DES CARTES, as it was agreeable to the principles of the old philoſophy. We may therefore truly ſay, that, in that part of philoſophy which relates to the mind, DES CARTES laid the foundation, and put us into that tract, which all wiſe men now acknowledge to be the only one in which we can expect ſucceſs.

With regard to phyſics, or the philoſophy of body, if DES CARTES had not the merit of leading men into the right tract, we muſt allow him that of bringing them out of a wrong one. The Peripatetics, by aſſigning to every ſpecies of body a particular ſubſtantial form, which produces, in an unknown manner, all the effects we obſerve in it, put a ſtop to all improvement in this branch of philoſophy. Gravity and levity, fluidity and hardneſs, heat and cold, were qualities ariſing from the ſubſtantial form of the bodies to which they belonged. Generation and corruption, ſubſtantial forms, and occult qualities, were always at hand, to reſolve every phænomenon. This philoſophy, therefore, inſtead of accounting for any of the phænomena of Nature, contrived only to give learned

CHAP. VIII. ed names to their unknown cauſes, a
barbarous terms, inſtead of the fruit

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and could reliſh nothing in philoſoph
ligible. ARISTOTLE, after a reign of
was now expoſed as an object of deriſion even to the vulgar, arrayed in the mock majeſty of his ſubſtantial forms and occult qualities. The ladies became fond of a philoſophy which was eaſily learned, and required no words too harſh for their delicate organs. Queens and Princeſſes, the moſt diſtinguiſhed perſonages of the age, courted the converſation of DES CARTES, and became adepts in his philoſophy. Witneſs CHRISTINA Queen of Sweden, and ELISABETH, daughter of FREDERICK King of Bohemia, the mother of our Royal Family. The laſt, though very young when DES CARTES wrote his *Principia*, he declares to be the only perſon he knew, who perfectly underſtood not only all his philoſophical writings, but the moſt abſtruſe of his mathematical works.

That men ſhould ruſh with violence from one extreme, without going more or leſs into the contrary extreme, is not to be expected from the weakneſs of huma
lowers were not exempted
extenſion, figure, and motio
nomena of the material ſyſte
cauſe is unknown, was to
been ſo happily delivered.

When Sir ISAAC NEWTON's doctrine of gravitation was publiſhed, the great objection to it, which hindered its general reception in Europe for half a century, was, that gravitation ſeemed to be an occult quality, as it could not be accounted for by extenſion, figure, and motion, the known attributes of body. They who defended him, found it difficult to anſwer this objection, to the ſatisfaction of thoſe who had been initiated in the principles of the Carteſian ſyſtem. But, by degrees, men came to be ſenſible, that, in revolting from ARISTOTLE, the Carteſians had gone into the oppoſite extreme; experience convinced them, that there are qualities in the material world, whoſe exiſtence is certain, though their cauſe be occult. To acknowledge this, is only a candid confeſſion of human ignorance, than which there is nothing more becoming a Philoſopher.

As all that we can know of the mind muſt be derived from a careful obſervation of its operations in ourſelves; ſo all that we can know of the material ſyſtem muſt be derived from what can be diſcovered by our ſenſes. DES CARTES was not ignorant of this; nor was his ſyſtem ſo unfriendly to obſervation and experiment as the old ſyſtem was. He made many experiments, and called earneſtly upon all lovers of truth to aid him in this way. But, believing that all the phænomena of the material world are the reſult of extenſion, figure, and motion, and that the Deity always combines theſe, ſo as to produce the phænomena in the ſimpleſt manner poſſible, he thought, that, from a few experiments, he might be able to diſcover the ſimpleſt way, in which the obvious phænomena of Nature can be produced, by matter and motion only; and that this muſt be the way in which they are actually produced. His conjectures were ingenious, upon the principles he had adopted: But they are found to be ſo far from the truth, that they ought for ever to diſcourage Philoſophers from truſting to conjecture in the operations of Nature.

The vortices or whirlpools of ſubtile matter, by which DES CARTES

CHAP. VIII. CARTES endeavoured to account for th
rial world, are now found to be fictio
ſpecies of ARISTOTLE.

It was reſerved for Sir ISAAC NEWTO
road to the knowledge of Nature's wor
to deſpiſe hypotheſes as the fictions
down as a rule of philoſophiſing, that
ought to be aſſigned but ſuch as can b
ſtence. He ſaw, that all the length
phænomena is to diſcover the laws
they are produced; and therefore, th
ſophiſing is this: From real facts
experiment, to collect by juſt induction the laws of Nature, and to apply the laws ſo diſcovered, to account for the phænomena of Nature.

Thus the natural Philoſopher has the rules of his art fixed with no leſs preciſion than the Mathematician, and may be no leſs certain when he keeps within them, and when he deviates from them: And though the evidence of a law of nature from induction is not demonſtrative, it is the only kind of evidence on which all the moſt important affairs of human life muſt reſt.

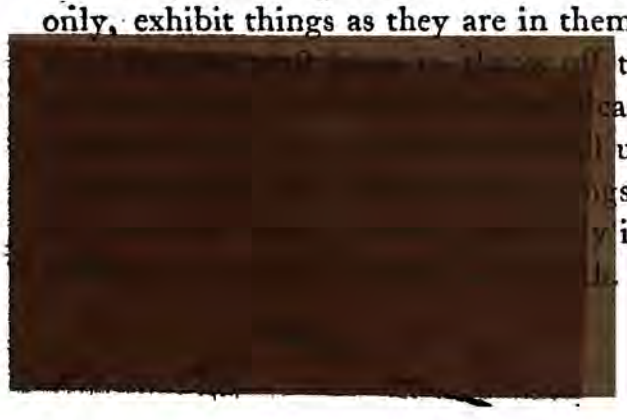
Purſuing this road without deviation, NEWTON diſcovered the laws of our planetary ſyſtem, and of the rays of light; and gave the firſt and the nobleſt examples of that chaſte induction, which Lord BACON could only delineate in theory.

How ſtrange is it, that
for ſo many ages, without
ſtrange, that after it has be
greſs made in it, many chu
of hypotheſis?

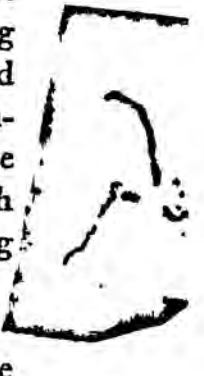
CHAP. VIII.

To return to DES CARTES's notions of the manner of our perceiving external objects, from which a concern to do juſtice to the merit of that great reformer in philoſophy has led me to digreſs, he took it for granted, as the old Philoſophers had done, that what we immediately perceive muſt be either in the mind itſelf, or in the brain, to which the mind is immediately preſent. The impreſſions made upon our organs, nerves, and brain, could be nothing according to his philoſophy but various modifications of extenſion, figure, and motion. There could be nothing in the brain like ſound or colour, taſte or ſmell, heat or cold; theſe are ſenſations in the mind, which, by the laws of the union of ſoul and body, are raiſed on occaſion of certain traces in the brain; and although he gives the name of ideas to thoſe traces in the brain, he does not think it neceſſary that they ſhould be perfectly like to the things which they repreſent, any more than that words or ſigns ſhould reſemble the things they ſignify. But, ſays he, that we may follow the received opinion as far as is poſſible, we may allow a ſlight reſemblance. Thus we know, that a print in a book may repreſent houſes, temples, and groves; and ſo far is it from being neceſſary that the print ſhould be perfectly like the thing it repreſents, that its perfection often requires the contrary: For a circle muſt often be repreſented by an ellipſe, a ſquare by a rhombus, and ſo of other things.

The perceptions of ſenſe, he thought, are to be referred ſolely to the union of ſoul and body. They commonly exhibit to us only what may hurt or profit our bodies; and rarely, and by accident only, exhibit things as they are in themſelves. It is by obſerving



the prejudices of ſenſe, and as which are by nature im- underſtand, that the nature s that affect our ſenſes, ſuch in this, that it is ſomething



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CHAP. VIII.

The writings of DES CARTES have
gree of perſpicuity; and he undoubt
particular, his philoſophy ſhould be
ARISTOTLE; yet, in what he has ſaid
tings, of our perception of external ob
obſcurity, and even inconſiſtency; w
had different opinions on the ſubject
difficulty he found in it, I will not pr

There are two points in particular,
him to himſelf: The *firſt*, regarding
of external objects, which are the imm
the *ſecond*, with regard to the veracity of our external ſenſes.

As to the *firſt*, he ſometimes places the ideas of material objects in the brain, not only when they are perceived, but when they are remembered or imagined; and this has always been held to be the Carteſian doctrine; yet he ſometimes ſays, that we are not to conceive the images or traces in the brain to be perceived, as if there were eyes in the brain; theſe traces are only occaſions on which, by the laws of the union of ſoul and body, ideas are excited in the mind; and therefore it is not neceſſary, that there ſhould be an exact reſemblance between the traces and the things repreſented by them, any more than that words or ſigns ſhould be exactly like the things ſignified by them.

Theſe two opinions, I think, cannot be reconciled. For if the images or traces in the brain are perceived, they muſt be the objects of perception, and not the occaſions of it only. On the other hand, if they are only the occaſions of our perceiving, they are not perceived at all. DES CARTES ſeems to have heſitated between the two opinions, or to have paſſed from the one to the other. Mr LOCKE ſeems in like manner to have wavered between the two; ſometimes repreſenting the ideas of material things as being in the brain, but more frequently as in the mind itſelf. Neither DES

CARTES

CARTES nor Mr LOCKE could, conſiſtently with themſelves, attribute any other qualities to images in the brain, but extenſion, figure, and motion; for as to thoſe qualities which Mr LOCKE diſtinguiſhed by the name of ſecondary qualities, both Philoſophers believed them not to belong to body at all, and therefore could not aſcribe them to images in the brain.

Sir ISAAC NEWTON and Dr SAMUEL CLARKE, uniformly ſpeak of the ſpecies or images of material things as being in that part of the brain called the *ſenſorium*, and perceived by the mind there preſent; but the former ſpeaks of this point only incidentally, and with his uſual modeſty, in the form of a query. MALEBRANCHE is perfectly clear and unambiguous in this matter. According to his ſyſtem, the images or traces in the brain are not perceived at all, they are only occaſions upon which, by the laws of Nature, certain ſenſations are felt by us, and certain of the divine ideas diſcovered to our minds.

The *ſecond* point on which DES CARTES ſeems to waver, is with regard to the credit that is due to the teſtimony of our ſenſes.

Sometimes, from the perfection of the Deity, and his being no deceiver, he infers, that our ſenſes and our other faculties cannot be fallacious: And ſince we ſeem clearly to perceive, that the idea of matter comes to us from things external, which it perfectly reſembles; therefore, we muſt conclude, that there really exiſts ſomething extended in length, breadth, and depth, having all the properties which we clearly perceive to belong to an extended thing.

At other times, we find DES CARTES and his followers making frequent complaints, as all the ancient Philoſophers did, of the fallacies of ſenſe. He warns us to throw off its prejudices, and to attend only, with our intellect, to the ideas implanted there. By this means we may perceive, that the nature of matter does not conſiſt in hardneſs, colour, weight, or any of thoſe things that af-

CHAP. VIII.

fect our ſenſes, but in this only, that it
length, breadth, and depth. The ſenſe
tive to our preſent ſtate; they exhibit
to profit or to hurt us, and rarely, and
are in themſelves.

It was probably owing to an averſion
philoſophy, of which we have not a clea
that DES CARTES was led to deny, that
matter diſtinct from thoſe qualities of it
ſay, that matter is ſomething extended,
tenſion, figure, mobility, therefore, are
belonging to this ſomething, which we
could not reliſh this obſcure *ſomething*, which is ſuppoſed to be the ſubject or *ſubſtratum* of thoſe qualities; and therefore maintained, that extenſion is the very eſſence of matter. But as we muſt aſcribe extenſion to ſpace as well as to matter, he found himſelf under a neceſſity of holding, that ſpace and matter are the ſame thing, and differ only in our way of conceiving them; ſo that, wherever there is ſpace there is matter, and no void left in the univerſe. The neceſſary conſequence of this, is, that the material world has no bounds nor limits. He did not, however, chuſe to call it infinite, but indefinite.

It was probably owing to the ſame cauſe that DES CARTES made the eſſence of the ſoul to conſiſt in thought: He would not allow it to be an unknown ſomething that has the power of thinking; it cannot therefore be without thought: And as he conceived that there can be no thought without ideas, the ſoul muſt have had ideas in its firſt formation, which, of conſequence, are innate.

The ſentiments of thoſe who came after DES CARTES, with regard to the nature of body and mind, have been various. Many have maintained, that body is only a collection of qualities to which we give one name; and that the notion of a ſubject of inheſion,

to

to which thoſe qualities belong, is only a fiction of the mind. Some have even maintained, that the ſoul is only a ſucceſſion of related ideas, without any ſubject of inheſion. It appears, by what has been ſaid, how far theſe notions are allied to the Carteſian ſyſtem.

The triumph of the Carteſian ſyſtem over that of ARISTOTLE, is one of the moſt remarkable revolutions in the hiſtory of philoſophy, and has led me to dwell longer upon it than the preſent ſubject perhaps required. The authority of ARISTOTLE was now no more. That reverence for hard words and dark notions, by which mens underſtanding had been ſtrangled in early years, was turned into contempt, and every thing ſuſpected which was not clearly and diſtinctly underſtood. This is the ſpirit of the Carteſian philoſophy, and is a more important acquiſition to mankind than any of its particular tenets; and for exerting this ſpirit ſo zealouſly, and ſpreading it ſo ſucceſsfully, DES CARTES deſerves immortal honour.

It is to be obſerved, however, that DES CARTES rejected a part only of the ancient theory, concerning the perception of external objects by the ſenſes, and that he adopted the other part. That theory may be divided into two parts: The *firſt*, that images, ſpecies, or forms of external objects, come from the object, and enter by the avenues of the ſenſes to the mind; the *ſecond* part is, That the external object itſelf is not perceived, but only the ſpecies or image of it in the mind. The firſt part DES CARTES and his followers rejected, and refuted by ſolid arguments; but the ſecond part, neither he, nor his followers, have thought of calling in queſtion; being perſuaded, that it is only a repreſentative image, in the mind, of the external object that we perceive, and not the object itſelf. And this image, which the Peripatetics called a ſpecies, he calls an idea, changing the name only, while he admits the thing.

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It ſeems ſtrange, that the great pa
took to throw off the prejudices of e
former opinions, and to aſſent to nothin
compelled his aſſent, ſhould not have l
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perfect lunacy to call in queſtion the e

It ſeems to be admitted as a firſt prin
unlearned, that what is really perceiv
perceive what does not exiſt is impoſſib
man and the Philoſopher agree. The unlearned man ſays, I perceive the external object, and I perceive it to exiſt. Nothing can be more abſurd than to doubt of it. The Peripatetic ſays, what I perceive is the very identical form of the object, which came immediately from the object, and makes an impreſſion upon my mind, as a ſeal does upon wax; and therefore, I can have no doubt of the exiſtence of an object whoſe form I perceive. But what ſays the Carteſian? I perceive not, ſays he, the external object itſelf. So far he agrees with the Peripatetic, and differs from the unlearned man. But I perceive an image, or form, or idea, in my own mind, or in my brain. I am certain of the exiſtence of the idea, becauſe I immediately perceive it. But how this idea is formed, or what it repreſents, is not ſelf-evident; and therefore I muſt find arguments, by which, from the exiſtence of the idea which I perceive, I can infer the exiſtence of an external object which it repreſents.

As I take this to be a juſt view of the principles of the unlearned man, of the Peripatetic, and of the Carteſian, ſo I think they all reaſon conſequentially from their ſeveral principles; that the Carteſian has ſtrong grounds to doubt of the exiſtence of external objects; the Peripatetic very little ground of doubt; and the unlearned

learned man none at all: And that the difference of their ſituation ariſes from this, that the unlearned man has no hypotheſis; the Peripatetic leans upon an hypotheſis; and the Carteſian upon one half of that hypotheſis.

DES CARTES, according to the ſpirit of his own philoſophy, ought to have doubted of both parts of the Peripatetic hypotheſis, or to have given his reaſons why he adopted one part, as well as why he rejected the other part; eſpecially, ſince the unlearned, who have the faculty of perceiving objects by their ſenſes in no leſs perfection than Philoſophers, and ſhould therefore know, as well as they, what it is they perceive, have been unanimous in this, that the objects they perceive are not ideas in their own minds, but things external. It might have been expected, that a Philoſopher who was ſo cautious as not to take his own exiſtence for granted without proof, would not have taken it for granted, without proof, that every thing he perceived was only ideas in his own mind.

But if DES CARTES made a raſh ſtep in this, as I apprehend he did, he ought not to bear the blame alone. His ſucceſſors have ſtill continued in the ſame track, and, after his example, have adopted one part of the ancient theory, to wit, that the objects we immediately perceive are ideas only. All their ſyſtems are built on this foundation.

CHAP. IX.

Of the Sentiments of Mr LOCKE.

THE reputation which LOCKE's Eſſay on human underſtanding had at home from the beginning, and which it has gradually acquired abroad, is a ſufficient teſtimony of its merit. There

CHAP. IX. There is perhaps no book of
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is more adapted to teach m
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a remarkable degree of ſimp
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author hath more ſucceſsfu
ous words, and the importa
notions in judging and reaſoning. His obſervations on the various powers of the human underſtanding, on the uſe and abuſe of words, and on the extent and limits of human knowledge, are drawn from attentive reflection on the operations of his own mind, the true ſource of all real knowledge on theſe ſubjects; and ſhew an uncommon degree of penetration and judgment: But he needs no panegyric of mine, and I mention theſe things, only that, when I have occaſion to differ from him, I may not be thought inſenſible of the merit of an author whom I highly reſpect, and to whom I owe my firſt lights in thoſe ſtudies, as well as my attachment to them.

He ſets out in his Eſſay with a full conviction, common to him with other Philoſophers, that ideas in the mind are the objects of all our thoughts in every operation of the underſtanding. This leads him to uſe the word *idea* ſo very frequently, beyond what was uſual in the Engliſh language, that he thought it neceſſary in his introduction to make this apology: "It being that term, ſays "he, which, I think, ſerves beſt to ſtand for whatſoever is the "object of underſtanding, when a man thinks; I have uſed it to "expreſs whatever is meant by phantaſm, notion, ſpecies, or what-"ever it is which the mind can be employed about in thinking; "and I could not avoid frequently uſing it. I preſume it will be "granted me, that there are ſuch ideas in mens minds; every "man is conſcious of them in himſelf, and mens words and "actions will ſatisfy him that they are in others."

Speaking

Speaking of the reality of our knowledge, he ſays, "It is evi- "dent the mind knows not things immediately, but only by the "intervention of the ideas it has of them: Our knowledge there- "fore is real, only ſo far as there is a conformity between our "ideas and the reality of things. But what ſhall be here the cri- "terion? How ſhall the mind, when it perceives nothing but its "own ideas, know that they agree with things themſelves? This, "though it ſeems not to want difficulty, yet I think there be two "ſorts of ideas that we may be aſſured agree with things."

We ſee that Mr LOCKE was aware no leſs than DES CARTES, that the doctrine of ideas made it neceſſary, and at the ſame time difficult, to prove the exiſtence of a material world without us; becauſe the mind, according to that doctrine, perceives nothing but a world of ideas in itſelf. Not only DES CARTES, but MALEBRANCHE, ARNAULD, and NORRIS, had perceived this difficulty, and attempted to remove it with little ſucceſs. Mr LOCKE attempts the ſame thing; but his arguments are feeble. He even ſeems to be conſcious of this: For he concludes his reaſoning with this obſervation, "That we have evidence ſufficient to direct us in attaining "the good and avoiding the evil, cauſed by external objects, and "that this is the important concern we have in being made ac- "quainted with them." This indeed is ſaying no more than will be granted by thoſe who deny the exiſtence of a material world.

As there is no material difference between LOCKE and DES CARTES with regard to the perception of objects by the ſenſes, there is the leſs occaſion, in this place, to take notice of all their differences in other points. They differed about the origin of our ideas. DES CARTES thought ſome of them were innate: The other maintained, that there are no innate ideas, and that they are all derived from two ſources, to wit, *ſenſation* and *reflection*; meaning by ſenſation, the operations of our external ſenſes; and by reflection, that attention which we are capable of giving to the operations of our own minds.

CHAP. IX. They differed with regard to
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Mr LOCKE explained, more
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and reducing them to genera and ſpecies. He was the firſt, I believe, who diſtinguiſhed in ſubſtances what he calls the nominal eſſence, which is only the notion we form of a genus or ſpecies, and which we expreſs by a definition; from the real eſſence or internal conſtitution of the thing, which makes it to be what it is. Without this diſtinction, the ſubtile diſputes which tortured the ſchoolmen for ſo many ages, in the controverſy between the nominaliſts and realiſts, could never be brought to an iſſue. He ſhews diſtinctly how we form abſtract and general notions, and the uſe and neceſſity of them in reaſoning. And as (according to the received principles of Philoſophers) every notion of our mind muſt have for its object an idea in the mind itſelf; he thinks that we form abſtract ideas by leaving out of the idea of an individual every thing wherein it differs from other individuals of the ſame ſpecies or genus; and that this power of forming abſtract ideas, is that which chiefly diſtinguiſhes us from brute animals, in whom he could ſee no evidence of any abſtract ideas.

Since the time of DES CARTES, Philoſophers have differed much with regard to the ſhare they aſcribe to the mind itſelf, in the fabrication of thoſe repreſentative beings called *ideas*, and the manner in which this work is carried on.

Of the authors I have met with, Dr ROBERT HOOK is the moſt explicit. He was one of the moſt ingenious and active members of the Royal Society of London at its firſt inſtitution; and frequently

quently read lectures to the Society, which were publiſhed among his poſthumous works. In his lectures upon light, Sect. 7. he makes ideas to be material ſubſtances; and thinks that the brain is furniſhed with a proper kind of matter for fabricating the ideas of each ſenſe. The ideas of ſight he thinks are formed of a kind of matter reſembling the Bononian ſtone, or ſome kind of phoſphorus; that the ideas of ſound are formed of ſome matter reſembling the chords or glaſſes which take a ſound from the vibrations of the air; and ſo of the reſt.

The ſoul, he thinks, may fabricate ſome hundreds of thoſe ideas in a day; and that as they are formed, they are puſhed farther off from the centre of the brain where the ſoul reſides. By this means they make a continued chain of ideas, coyled up in the brain, the firſt end of which is fartheſt removed from the centre or ſeat of the ſoul; and the other end is always at the centre, being the laſt idea formed, which is always preſent the moment when conſidered; and therefore, according as there is a greater number of ideas between the preſent ſenſation or thought in the centre and any other, the ſoul is apprehenſive of a larger portion of time interpoſed.

Mr Locke has not entered into ſo minute a detail of this manufacture of ideas; but he aſcribes to the mind a very conſiderable hand in forming its own ideas. With regard to our ſenſations, the mind is paſſive, "they being produced in us, only by differ-"ent degrees and modes of motion in our animal ſpirits, vari-"ouſly agitated by external objects:" Theſe, however, ceaſe to be, as ſoon as they ceaſe to be perceived; but, by the faculties of memory and imagination, "the mind has an ability, when it wills, "to revive them again, and, as it were, to paint them anew upon "itſelf, though ſome with more, ſome with leſs difficulty."

As to the ideas of reflection, he aſcribes them to no other cauſe but to that attention which the mind is capable of giving to its own operations: Theſe, therefore, are formed by the mind itſelf.

CHAP. IX. He aſcribes likewiſe to the
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all the individuals of the kin

Theſe, I think, are the powers which Mr LOCKE aſcribes to the mind itſelf in the fabrication of its ideas. Biſhop BERKELEY, as we ſhall ſee afterwards, abridged them conſiderably, and Mr HUME much more.

The ideas we have of the various qualities of bodies are not all, as Mr LOCKE thinks, of the ſame kind. Some of them are images or reſemblances of what is really in the body; others are not. There are certain qualities inſeparable from matter; ſuch as extenſion, ſolidity, figure, mobility. Our ideas of theſe are real reſemblances of the qualities in the body; and theſe he calls primary qualities: But colour, ſound, taſte, ſmell, heat, and cold, he calls ſecondary qualities, and thinks that they are only powers in bodies of producing certain ſenſations in us; which ſenſations have nothing reſembling them, though they are commonly thought to be exact reſemblances of ſomething in the body. "Thus, ſays he, "the idea of heat or light, which we receive, by our eye or "touch, from the ſun, are commonly thought real qualities exiſt-"ing in the ſun, and ſomething more than mere powers in it."

The names of primary and ſecondary qualities, were, I believe, firſt uſed by Mr LOCKE; but the diſtinction, which they expreſs, was well underſtood by DES CARTES, and is explained by him in his *Principia*, part 1. ſect. 69, 70, 71.

Although

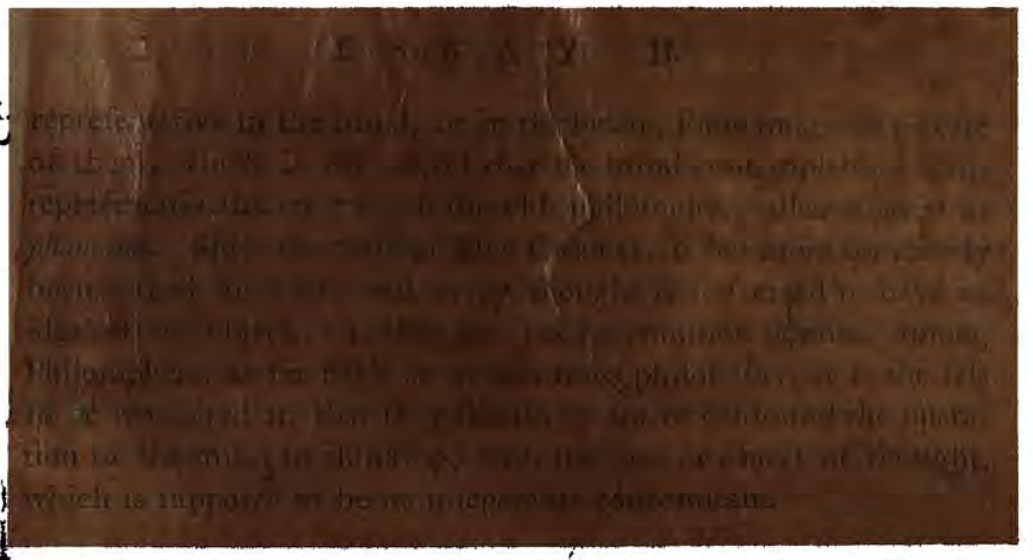
CHAP. IX.

Although no author has more merit than Mr LOCKE, in pointing out the ambiguity of words, and resolving, by that means, many knotty questions, which had tortured the wits of the schoolmen; yet, I apprehend he has been sometimes misled by the ambiguity of the word *idea*, which he uses so often almost in every page of his essay.

In the explication given of this word, we took notice of two meanings given to it; a popular and a philosophical. In the popular meaning, to have an idea of any thing, signifies nothing more than to think of it.

Although the operations of the mind are most properly and naturally, and indeed most commonly in all vulgar languages, expressed by active verbs, there is another way of expressing them less common, but equally well understood. To think of a thing, and to have a thought of it; to believe a thing, and to have a belief of it; to see a thing, and have a sight of it; to conceive a thing, and to have a conception, notion, or idea of it, are phrases perfectly synonymous. In these phrases, the thought means nothing but the act of thinking; the belief, the act of believing; and the conception, notion, or idea, the act of conceiving. To have a clear and distinct idea, is, in this sense, nothing else but to conceive the thing clearly and distinctly. When the word *idea* is taken in this popular sense, there can be no doubt of our having ideas in our minds. To think without ideas would be to think without thought, which is a manifest contradiction.

But there is another meaning of the word *idea* peculiar to Philosophers, and grounded upon a philosophical theory, which the vulgar never think of. Philosophers, ancient and modern, have maintained, that the operations of the mind, like the tools of an artificer, can only be employed upon objects that are present, in the mind, or in the brain, where the mind is supposed to reside. Therefore, objects that are distant, in time or place, must have a representative



If we pay any regard to the common ſenſe of mankind, thought and the object of thought are different things, and ought to be diſtinguiſhed. It is true, thought cannot be without an object; for every man who thinks muſt think of ſomething; but the object he thinks of is one thing, his thought of that object is another thing. They are diſtinguiſhed in all languages even by the vulgar; and many things may be affirmed of thought, that is, of the operation of the mind in thinking, which cannot without error, and even abſurdity, be affirmed of the object of that operation.

From this, I think it is evident, that if the word *idea*, in a work where it occurs in every paragraph, is uſed without any intimation of the ambiguity of the word, ſometimes to ſignify thought, or the operation of the mind in thinking, ſometimes to ſignify thoſe internal objects of thought which Philoſophers ſuppoſe, this muſt occaſion confuſion in the thoughts both of the author and of the readers. I take this to be the greateſt blemiſh in the Eſſay on human underſtanding. I apprehend this is the true ſource of ſeveral paradoxical opinions in that excellent work, which I ſhall have occaſion to take notice of.

Here it is very natural to aſk, Whether it was Mr Locke's opinion, that ideas are the only objects of thought? or, Whether it is not poſſible for men to think of things which are not ideas in the mind?

To

To this queſtion it is not eaſy to give a direct anſwer. On the one hand, he ſays often, in diſtinct and ſtudied expreſſions, that the term *idea* ſtands for whatever is the object of the underſtanding when a man thinks, or whatever it is which the mind can be employed about in thinking: That the mind perceives nothing but its own ideas: That all knowledge conſiſts in the perception of the agreement or diſagreement of our ideas: That we can have no knowledge farther than we have ideas. Theſe, and many other expreſſions of the like import, evidently imply, that every object of thought muſt be an idea, and can be nothing elſe.

On the other hand, I am perſuaded that Mr LOCKE would have acknowledged, that we may think of ALEXANDER the Great, or of the planet Jupiter, and of numberleſs things, which he would have owned are not ideas in the mind, but objects which exiſt independent of the mind that thinks of them.

How ſhall we reconcile the two parts of this apparent contradiction? All I am able to ſay upon Mr LOCKE's principles to reconcile them, is this, That we cannot think of ALEXANDER, or of the planet Jupiter, unleſs we have in our minds an idea, that is, an image or picture of thoſe objects. The idea of ALEXANDER is an image, or picture, or repreſentation of that hero in my mind; and this idea is the immediate object of my thought when I think of ALEXANDER. That this was LOCKE's opinion, and that it has been generally the opinion of Philoſophers, there can be no doubt.

But, inſtead of giving light to the queſtion propoſed, it ſeems to involve it in greater darkneſs.

When I think of ALEXANDER, I am told there is an image or idea of ALEXANDER in my mind, which is the immediate object of this thought. The neceſſary conſequence of this ſeems to be, that there are two objects of this thought; the idea, which is in the mind, and the perſon repreſented by that idea; the firſt, the immediate

CHAP. IX. immediate object of the thought, the laſt, the object of the ſame thought, but not the immediate object. This is a hard ſaying; for it makes every thought of things external to have a double object. Every man is conſcious of [illegible] yet, upon attentive reflection, he perceives [illegible] object he thinks about. Sometimes men [illegible] cy always know when they do ſo: And [illegible] who has expreſsly owned this duplicity [illegible] ough it follows neceſſarily from ma[illegible] thought, there is one object, that is im[illegible] itſelf, and another object, which is not [illegible] in the mind.

Beſides this, it ſeems very hard, or rather impoſſible, to underſtand what is meant by an object of thought, that is not an immediate object of thought. A body in motion may move another that was at reſt, by the medium of a third body that is interpoſed. This is eaſily underſtood; but we are unable to conceive any medium interpoſed between a mind and the thought of that mind; and, to think of any object by a medium, ſeems to be words without any meaning. There is a ſenſe in which a thing may be ſaid to be perceived by a medium. Thus any kind of ſign may be ſaid to be the medium by which I perceive or underſtand the thing ſignified. The ſign, by cuſtom, or compact, or perhaps by nature, introduces the thought of the thing ſignified. But here the thing ſignified, when it is introduced to the thought, is an object of thought no leſs immediate than the ſign was before: And there are here two objects of thought, one ſucceeding another, which we have ſhown is not the caſe with reſpect to an idea, and the object it repreſents.

I apprehend, therefore, that if Philoſophers will maintain that ideas in the mind are the only immediate objects of thought, they will be forced to grant that they are the ſole objects of thought, and that it is impoſſible for men to think of any thing elſe. Yet, ſurely,

ſurely, Mr LOCKE believed that we can think of many things that are not ideas in the mind; but he ſeems not to have perceived, that the maintaining that ideas in the mind are the only immediate objects of thought, muſt neceſſarily draw this conſequence along with it.

The conſequence, however, was ſeen by Biſhop BERKELEY and Mr HUME, who rather choſe to admit the conſequence than to give up the principle from which it follows.

Perhaps it was unfortunate for Mr LOCKE, that he uſed the word idea ſo very frequently, as to make it very difficult to give the attention neceſſary to put it always to the ſame meaning. And it appears evident, that, in many places, he means nothing more by it but the notion or conception we have of any object of thought; that is, the act of the mind in conceiving it, and not the object conceived.

In explaining this word, he ſays, that he uſes it for whatever is meant by phantaſm, notion, ſpecies. Here are three ſynonymes to the word *idea*. The firſt and laſt are very proper to expreſs the philoſophical meaning of the word, being terms of art in the Peripatetic philoſophy, and ſignifying images of external things in the mind, which, according to that philoſophy, are objects of thought. But the word *notion* is a word in common language, whoſe meaning agrees exactly with the popular meaning of the word *idea*, but not with the philoſophical.

When theſe two different meanings of the word *idea* are confounded in a ſtudied explication of it, there is little reaſon to expect that they ſhould be carefully diſtinguiſhed in the frequent uſe of it. There are many paſſages in the Eſſay, in which, to make them intelligible, the word *idea* muſt be taken in one of thoſe ſenſes, and many others, in which it muſt be taken in the other. It ſeems probable, that the author, not attending to this ambiguity of the

CHAP. IX. word, uſed it in the one ſenſe or the other, as the ſubject-matter required; and the far greater part of his readers have done the ſame.

There is a third ſenſe, in [redacted] not unfrequently, to ſignify objects of [redacted] the mind, but external. Of this he ſee[redacted] ſomewhere makes an apology for it. Wh[redacted]es in innumerable places, that all huma[redacted] the perception of the agreement or diſagr[redacted] it is impoſſible to put a meaning upon this, [redacted] his principles, unleſs he means by ideas every object of human thought, whether mediate or immediate; every thing, in a word, that can be ſignified by the ſubject, or predicate of a propoſition.

Thus we ſee, that the word *idea* has three different meanings in the Eſſay; and the author ſeems to have uſed it ſometimes in one, ſometimes in another, without being aware of any change in the meaning. The reader ſlides eaſily into the ſame fallacy, that meaning occurring moſt readily to his mind which gives the beſt ſenſe to what he reads. I have met with perſons profeſſing no ſlight acquaintance with the Eſſay on human underſtanding, who maintained, that the word *idea*, wherever it occurs, means nothing more than thought; and that where he ſpeaks of ideas as images in the mind, and as objects of thought, he is not to be underſtood as ſpeaking properly, but figuratively or analogically: And indeed I apprehend, that it would be no ſmall advantage to many paſſages in the book, if they could admit of this interpretation.

It is not the fault of this Philoſopher alone to have given too little attention to the diſtinction between the operations of the mind and the objects of thoſe operations. Although this diſtinction be familiar to the vulgar, and found in the ſtructure of all languages, Philoſophers, when they ſpeak of ideas, often confound the

the two together; and their theory concerning ideas has led them to do ſo: For ideas being ſuppoſed to be a ſhadowy kind of beings, intermediate between the thought, and the object of thought, ſometimes ſeem to coaleſce with the thought, ſometimes with the object of thought, and ſometimes to have a diſtinct exiſtence of their own. CHAP. IX.

The ſame philoſophical theory of ideas has led Philoſophers to confound the different operations of the underſtanding, and to call them all by the name of perception. Mr LOCKE, though not free from this fault, is not ſo often chargeable with it, as ſome who came after him. The vulgar give the name of perception to that immediate knowledge of external objects which we have by our external ſenſes. This is its proper meaning in our language, though ſometimes it may be applied to other things metaphorically or analogically. When I think of any thing that does not exiſt, as of the republic of Oceana, I do not perceive it; I only conceive or imagine it: When I think of what happened to me yeſterday, I do not perceive but remember it: When I am pained with the gout, it is not proper to ſay I perceive the pain; I feel it; or am conſcious of it: It is not an object of perception, but of ſenſation and of conſciouſneſs. So far the vulgar diſtinguiſh very properly the different operations of the mind, and never confound the names of things ſo different in their nature: But the theory of ideas leads Philoſophers to conceive all thoſe operations to be of one nature, and to give them one name: They are all, according to that theory, the perception of ideas in the mind. Perceiving, remembering, imagining, being conſcious, are all perceiving ideas in the mind, and are called *perceptions*. Hence it is that Philoſophers ſpeak of the perceptions of memory, and the perceptions of imagination. They make ſenſation to be a perception; and every thing we perceive by our ſenſes to be an idea of ſenſation: Sometimes they ſay, that they are conſcious of the ideas in their own minds, ſometimes that they perceive them.

CHAP. X. However improbable it may appear that Philoſophers, who have taken pains to ſtudy the operations of their own minds, ſhould expreſs them leſs properly, and leſs diſtinctly than the vulgar, it ſeems really to be the caſe; and the only account that can be given of this ſtrange phænomenon, I take to be this: That the vulgar ſeek no theory to account for the operations of their minds; they know that they ſee, and hear, and remember, and imagine; and thoſe who think diſtinctly will expreſs theſe operations diſtinctly, as their conſciouſneſs repreſents them to the mind: But Philoſophers think they ought to know not only that there are ſuch operations, but how they are performed; how they ſee, and hear, and remember, and imagine; and, having invented a theory to explain theſe operations, by ideas or images in the mind, they ſuit their expreſſions to their theory; and as a falſe comment throws a cloud upon the text, ſo a falſe theory darkens the phænomena which it attempts to explain.

We ſhall examine this theory afterwards. Here I would only obſerve, that if it is not true, it may be expected that it ſhould lead ingenious men who adopt it to confound the operations of the mind with their objects, and with one another, even where the common language of the unlearned clearly diſtinguiſhes them. One that truſts to a falſe guide is in greater danger of being led aſtray than he who truſts his own eyes, though he ſhould be but indifferently acquainted with the road.

CHAP. X.

Of the Sentiments of Biſhop BERKELEY.

GEORGE BERKELEY, afterwards Biſhop of Cloyne, publiſhed his new Theory of Viſion in 1709; his Treatiſe on the Principles of Human Knowledge in 1710; and his Dialogues between

between Hylas and Philonous in 1713; being then a Fellow of Trinity College, Dublin. He is acknowledged univerſally to have great merit as an excellent writer, and a very acute and clear reaſoner on the moſt abſtract ſubjects, not to ſpeak of his virtues as a man, which were very conſpicuous: Yet the doctrine chiefly held forth in the Treatiſes above mentioned, eſpecially in the two laſt, has generally been thought ſo very abſurd, that few can be brought to think that he either believed it himſelf, or that he ſeriouſly meant to perſuade others of its truth.

He maintains, and thinks he has demonſtrated, by a variety of arguments, grounded on principles of philoſophy univerſally received, that there is no ſuch thing as matter in the univerſe; that ſun and moon, earth and ſea, our own bodies, and thoſe of our friends, are nothing but ideas in the minds of thoſe who think of them, and that they have no exiſtence when they are not the objects of thought; that all that is in the univerſe may be reduced to two categories, to wit, minds, and ideas in the mind.

But however abſurd this doctrine might appear to the unlearned, who conſider the exiſtence of the objects of ſenſe as the moſt evident of all truths, and what no man in his ſenſes can doubt; the Philoſophers who had been accuſtomed to conſider ideas as the immediate objects of all thought, had no title to view this doctrine of BERKELEY in ſo unfavourable a light.

They were taught by DES CARTES, and by all that came after him, that the exiſtence of the objects of ſenſe is not ſelf-evident, but requires to be proved by arguments; and although DES CARTES, and many others, had laboured to find arguments for this purpoſe, there did not appear to be that force and clearneſs in them which might have been expected in a matter of ſuch importance. Mr NORRIS had declared, that after all the arguments that had been offered, the exiſtence of an external world is only probable, but by no means certain. MALEBRANCHE thought it reſted

CHAP. X. reſted upon the authority of revelation, and th[redacted] drawn from reaſon were not perfectly concluſive[redacted] that the argument from revelation was a mere[redacted] revelation comes to us by our ſenſes, and muſt [redacted] thority.

Thus we ſee, that the new philoſophy had been making gradual approaches towards BERKELEY's opinion; and, whatever others might do, the Philoſophers had no title to look upon it as abſurd, or unworthy of a fair examination. Several authors attempted to anſwer his arguments, but with little ſucceſs, and others acknowledged that they could neither anſwer them nor aſſent to them. It is probable the Biſhop made but few converts to his doctrine; but it is certain he made ſome; and that he himſelf continued, to the end of his life, firmly perſuaded, not only of its truth, but of its great importance for the improvement of human knowledge, and eſpecially for the defence of religion. Dial. Pref. "If the principles which I here endeavour to propagate are "admitted for true, the conſequences which I think evidently "flow from thence are, that atheiſm and ſcepticiſm will be utter-"ly deſtroyed, many intricate points made plain, great difficul-"ties ſolved, ſeveral uſeleſs parts of ſcience retrenched, ſpecula-"tion referred to practice, and men reduced from paradoxes to "common ſenſe."

In the Theory of viſion, he goes no farther than to aſſert that the objects of ſight are nothing but ideas in the mind, granting, or at leaſt not denying, that there is a tangible world, which is really external, and which exiſts whether we perceive it or not. Whether the reaſon of this was, that his ſyſtem had not, at that time, wholly opened to his own mind, or whether he thought it prudent to let it enter into the minds of his readers by degrees, I cannot ſay. I think he inſinuates the laſt as the reaſon in the Principles of human knowledge.

The

The Theory of viſion, however, taken by itſelf, and without relation to the main branch of his ſyſtem, contains very important diſcoveries, and marks of great genius. He diſtinguiſhes, more accurately than any that went before him, between the immediate objects of ſight, and thoſe of the other ſenſes which are early aſſociated with them. He ſhews, that diſtance, of itſelf, and immediately, is not ſeen; but that we learn to judge of it by certain ſenſations and perceptions which are connected with it. This is a very important obſervation; and, I believe, was firſt made by this author. It gives much new light to the operations of our ſenſes, and ſerves to account for many phænomena in optics, of which the greateſt adepts in that ſcience had always either given a falſe account, or acknowledged that they could give none at all.

We may obſerve, by the way, that the ingenious author ſeems not to have attended to a diſtinction, by which his general aſſertion ought to have been limited. It is true that the diſtance of an object from the eye is not immediately ſeen; but there is a certain kind of diſtance of one object from another which we ſee immediately. The author acknowledges, that there is a viſible extenſion, and viſible figures, which are proper objects of ſight; there muſt therefore be a viſible diſtance. Aſtronomers call it angular diſtance; and although they meaſure it by the angle, which is made by two lines drawn from the eye to the two diſtant objects, yet it is immediately perceived by ſight, even by thoſe who never thought of that angle.

He led the way in ſhewing how we learn to perceive the diſtance of an object from the eye, though this ſpeculation was carried farther by others who came after him. He made the diſtinction between that extenſion and figure which we perceive by ſight only, and that which we perceive by touch; calling the firſt, viſible, the laſt, tangible extenſion and figure. He ſhewed likewiſe, that tangible extenſion, and not viſible, is the object of geometry, although

CHAP. X. though Mathematicians commonly uſe
demonſtrations.

The notion of extenſion and figure
only, and that which we get from touch
ly conjoined from our infancy in all th
the objects of ſenſe, that it required great abilities to diſtinguiſh them accurately, and to aſſign to each ſenſe what truly belongs to it; "ſo difficult a thing it is," as BERKELEY juſtly obſerves, "to diſſolve an union ſo early begun, and confirmed by "ſo long a habit." This point he has laboured, through the whole of the Eſſay on viſion, with that uncommon penetration and judgment which he poſſeſſed, and with as great ſucceſs as could be expected in a firſt attempt upon ſo abſtruſe a ſubject.

He concludes this Eſſay, by ſhewing, in no leſs than ſeven ſections, the notions which an intelligent being, endowed with ſight, without the ſenſe of touch, might form of the objects of ſenſe. This ſpeculation, to ſhallow thinkers, may appear to be egregious trifling. To Biſhop BERKELEY it appeared in another light, and will do ſo to thoſe who are capable of entering into it, and who know the importance of it, in ſolving many of the phænomena of viſion. He ſeems, indeed, to have exerted more force of genius in this than in the main branch of his ſyſtem.

In the new philoſophy, the pillars by which the exiſtence of a material world was ſupported, were ſo feeble, that it did not require the force of a SAMSON to bring them down; and in this we have not ſo much reaſon to admire the ſtrength of BERKELEY's genius, as his boldneſs in publiſhing to the world an opinion, which the unlearned would be apt to interpret as the ſign of a crazy intellect. A man who was firmly perſuaded of the doctrine univerſally received by Philoſophers concerning ideas, if he could but take courage to call in queſtion the exiſtence of a material world, would eaſily find unanſwerable arguments in that doctrine. "Some

"truths

truths there are, ſays BERKELEY, ſo near and obvious to the "mind, that a man need only open his eyes to ſee them. Such, "he adds, I take this important one to be, that all the choir of "heaven, and furniture of the earth; in a word, all thoſe bodies "which compoſe the mighty frame of the world, have not any "ſubſiſtence without a mind." Princ. § 6.

The principle from which this important concluſion is obviouſly deduced, is laid down in the firſt ſentence of his principles of knowledge as evident; and indeed it has always been acknowledged by Philoſophers. "It is evident, ſays he, to any one who "takes a ſurvey of the objects of human knowledge, that they "are either ideas actually imprinted on the ſenſes, or elſe ſuch as "are perceived, by attending to the paſſions and operations of the "mind; or, laſtly, ideas formed by help of memory and imagination, either compounding, dividing, or barely repreſenting thoſe "originally perceived in the foreſaid ways."

This is the foundation on which the whole ſyſtem reſts. If this be true; then, indeed, the exiſtence of a material world muſt be a dream that has impoſed upon all mankind from the beginning of the world.

The foundation on which ſuch a fabric reſts ought to be very ſolid, and well eſtabliſhed; yet BERKELEY ſays nothing more for it than that it is evident. If he means that it is ſelf-evident; this, indeed, might be a good reaſon for not offering any direct argument in proof of it. But I apprehend this cannot juſtly be ſaid. Self-evident propoſitions are thoſe which appear evident to every man of ſound underſtanding who apprehends the meaning of them diſtinctly, and attends to them without prejudice. Can this be ſaid of this propoſition, that all the objects of our knowledge are ideas in our own minds? I believe, that, to any man uninſtructed in philoſophy, this propoſition will appear very improbable, if not abſurd. However ſcanty his knowledge may be, he conſiders the

CHAP. X. ſun and moon, the earth and ſea, as objects of it [redacted] difficult to perſuade him, that thoſe objects of his [redacted] ideas in his own mind, and have no exiſtence, w[redacted] think of them. If I may preſume to ſpeak my ow[redacted] once believed this doctrine of ideas ſo firmly, as [redacted] whole of BERKELEY's ſyſtem in conſequence of [redacted] other conſequences to follow from it, which gave [redacted] fineſs than the want of a material world, it came [redacted] more than forty years ago, to put the queſtion, W[redacted] have I for this doctrine, that all the objects of my [redacted] ideas in my own mind? From that time to the preſent, I have been candidly and impartially, as I think, ſeeking for the evidence of this principle, but can find none, excepting the authority of Philoſophers.

We ſhall have occaſion to examine its evidence afterwards. I would at preſent only obſerve, that all the arguments brought by BERKELEY againſt the exiſtence of a material world are grounded upon it; and that he has not attempted to give any evidence for it, but takes it for granted, as other Philoſophers had done before him.

But ſuppoſing this principle to be true, BERKELEY's ſyſtem is impregnable. No demonſtration can be more evident than his reaſoning from it. Whatever is perceived is an idea, and an idea can only exiſt in a mind. It has no exiſtence when it is not perceived; nor can there be any thing like an idea, but an idea.

So ſenſible he was, that it required no laborious reaſoning to deduce his ſyſtem from the principle laid down, that he was afraid of being thought needleſsly prolix in handling the ſubject, and makes an apology for it. Princ. § 22. "To what purpoſe is it, ſays he, "to dilate, upon that which may be demonſtrated, with the utmoſt "evidence, in a line or two, to any one who is capable of the "leaſt reflection." But though his demonſtration might have been comprehended

comprehended in a line or two, he very prudently thought, that an opinion, which the world would be apt to look upon as a monſter of abſurdity, would not be able to make its way at once, even by the force of a naked demonſtration. He obſerves juſtly, Dial. 2. "That though a demonſtration be never ſo well grounded, and "fairly propoſed, yet, if there is, withal, a ſtrain of prejudice, "or a wrong bias on the underſtanding, can it be expected to per- "ceive clearly, and adhere firmly to the truth? No; there is need "of time and pains; the attention muſt be awakened and detain- "ed, by a frequent repetition of the ſame thing, placed often in "the ſame, often in different lights."

It was therefore neceſſary to dwell upon it, and turn it on all ſides till it became familiar; to conſider all its conſequences, and to obviate every prejudice and preſſeſſion that might hinder its admittance. It was even a matter of ſome difficulty to fit it to common language, ſo far as to enable men to ſpeak and reaſon about it intelligibly. Thoſe who have entered ſeriouſly into BERKELEY's ſyſtem, have found, after the all aſſiſtance which his writings give, that time and practice are neceſſary to acquire the habit of ſpeaking and thinking diſtinctly upon it.

BERKELEY foreſaw the oppoſition that would be made to his ſyſtem, from two different quarters; *firſt*, from the Philoſophers; and, *ſecondly*, from the vulgar, who are led by the plain dictates of nature. The firſt he had the courage to oppoſe openly and avowedly; the ſecond he dreaded much more, and therefore takes a great deal of pains, and, I think, uſes ſome art, to court into his party. This is particularly obſervable in his Dialogues. He ſets out with a declaration, Dial. 1. "That, of late, he had quitted "ſeveral of the ſublime notions he had got in the ſchools of the "Philoſophers for vulgar opinions," and aſſures HYLAS, his fellow-dialogiſt, "That, ſince this revolt from metaphyſical notions "to the plain dictates of nature, and common ſenſe, he found his "underſtanding ſtrangely enlightened; ſo that he could now eaſily

CHAP. X.

" comprehend a great many
" ry and riddle." Pref. to D
" true, men will be reduce
At the ſame time, he ackno
" a great oppoſition to the
" ſo far prevailed againſt th
" mankind."

When HYLAS objects to him, Dial. 3. "You can never per-
" ſuade me PHILONOUS, that the denying of matter or corporeal
" ſubſtance is not repugnant to the univerſal ſenſe of mankind."
He anſwers, " I wiſh both our opinions were fairly ſtated, and ſub-
" mitted to the judgment of men who had plain common ſenſe,
" without the prejudices of a learned education. Let me be re-
" preſented as one who truſts his ſenſes, who thinks he knows the
" things he ſees and feels, and entertains no doubt of their exiſt-
" ence.—If by material ſubſtance is meant only ſenſible body, that
" which is ſeen and felt, (and the unphiloſophical part of the
" world, I dare ſay mean no more), then I am more certain of
" matter's exiſtence than you or any other Philoſopher pretend to
" be. If there be any thing which makes the generality of man-
" kind averſe from the notions I eſpouſe, it is a miſapprehenſion
" that I deny the reality of ſenſible things: But as it is you who
" are guilty of that, and not I, it follows, that, in truth, their
" averſion is againſt your notions, and not mine.—I am content to
" appeal to the common ſenſe of the world for the truth of my no-
" tion.—I am of a vulgar caſt, ſimple enough to believe my ſenſes,
" and to leave things as I find them.—I cannot, for my life, help
" thinking, that ſnow is white, and fire hot."

When HYLAS is at laſt entirely converted, he obſerves to PHI-
LONOUS, " After all, the controverſy about matter, in the ſtrict ac-
" ceptation of it, lies altogether between you and the Philoſophers,
" whoſe principles, I acknowledge, are not near ſo natural, or ſo agree-
" able to the common ſenſe of mankind, and holy ſcripture, as yours."

PHILONOUS

PHILONOUS obſerves in the end, " That he does not pretend to be " a ſetter up of new notions, his endeavours tend only to unite, " and to place in a clearer light, that truth which was before " ſhared between the vulgar and the Philoſophers; the former " being of opinion, that thoſe things they immediately perceive " are the real things; and the latter, that the things immediately " perceived are ideas which exiſt only in the mind; which two " things put together do, in effect, conſtitute the ſubſtance of what " he advances:" And he concludes by obſerving, " That thoſe " principles, which at firſt view lead to ſcepticiſm, purſued to a " certain point, bring men back to common ſenſe."

Theſe paſſages ſhow ſufficiently the author's concern to reconcile his ſyſtem to the plain dictates of nature and common ſenſe, while he expreſſes no concern to reconcile it to the received doctrines of Philoſophers. He is fond to take part with the vulgar againſt the Philoſophers, and to vindicate common ſenſe againſt their innovations. What pity is it that he did not carry this ſuſpicion of the doctrine of Philoſophers ſo far as to doubt of that philoſophical tenet on which his whole ſyſtem is built, to wit, that the things immediately perceived by the ſenſes are ideas which exiſt only in the mind!

After all, it ſeems no eaſy matter to make the vulgar opinion and that of BERKELEY to meet. And to accompliſh this, he ſeems to me to draw each out of its line towards the other, not without ſome ſtraining.

The vulgar opinion he reduces to this, that the very things which we perceive by our ſenſes do really exiſt. This he grants: For theſe things, ſays he, are ideas in our minds, or complexions of ideas, to which we give one name, and conſider as one thing; theſe are the immediate objects of ſenſe, and theſe do really exiſt. As to the notion, that thoſe things have an abſolute external exiſtence, independent of being perceived by any mind, he thinks that

CHAP. X.

that this is no notion of the v
phers; and that the notion of
or ſupport of that collection o
the name of an apple or a mel
loſophers, and is not found wi
by Philoſophers. The ſubſtan
vulgar never think of it; or,
word, they mean no more by
lities which they, from findi
been accuſtomed to call by one name, and to conſider as one thing.

Thus he draws the vulgar opinion near to his own; and, that he may meet it half way, he acknowledges, that material things have a real exiſtence out of the mind of this or that perſon; but the queſtion, ſays he, between the materialiſt and me, is, Whether they have an abſolute exiſtence diſtinct from their being perceived by God, and exterior to all minds? This indeed, he ſays, ſome Heathens and Philoſophers have affirmed; but whoever entertains notions of the Deity, ſuitable to the holy ſcripture, will be of another opinion.

But here an objection occurs, which it required all his ingenuity to anſwer. It is this: The ideas in my mind cannot be the ſame with the ideas of any other mind; therefore, if the objects I perceive be only ideas, it is impoſſible that the objects I perceive can exiſt any where, when I do not perceive them; and it is impoſſible that two or more minds can perceive the ſame object.

To this BERKELEY anſwers, that this objection preſſes no leſs the opinion of the materialiſt Philoſopher than his: But the difficulty is to make his opinion coincide with the notions of the vulgar, who are firmly perſuaded, that the very identical objects which they perceive, continue to exiſt when they do not perceive them; and who are no leſs firmly perſuaded, that when ten men look at the ſun or the moon, they all ſee the ſame individual object.

To

To reconcile this repugnancy, he obſerves, Dial. 3. "That if "the term *ſame* be taken in the vulgar acceptation, it is certain, "(and not at all repugnant to the principles he maintains,) that "different perſons may perceive the ſame thing; or the ſame thing "or idea exiſt in different minds. Words are of arbitrary impo- "ſition; and ſince men are uſed to apply the word *ſame*, where "no diſtinction or variety is perceived, and he does not pretend "to alter their perceptions, it follows, that as men have ſaid be- "fore, *ſeveral ſaw the ſame thing;* ſo they may, upon like occaſions, "ſtill continue to uſe the ſame phraſe without any deviation, either "from propriety of language or the truth of things: But if the "term *ſame* be uſed in the acceptation of Philoſophers, who "pretend to an abſtracted notion of identity, then, according "to their ſundry definitions of this term, (for it is not yet agreed "wherein that philoſophic identity conſiſts,) it may or may not "be poſſible for divers perſons to perceive the ſame thing: But "whether Philoſophers ſhall think fit to call a thing the *ſame* or "no, is, I conceive, of ſmall importance. Men may diſpute about "identity and diverſity, without any real difference in their "thoughts and opinions, abſtracted from names."

Upon the whole, I apprehend that BERKELEY has carried this attempt to reconcile his ſyſtem to the vulgar opinion farther than reaſon ſupports him; and he was no doubt tempted to do ſo, from a juſt apprehenſion that, in a controverſy of this kind, the common ſenſe of mankind is the moſt formidable antagoniſt.

BERKELEY has employed much pains and ingenuity to ſhow that his ſyſtem, if received and believed, would not be attended with thoſe bad conſequences in the conduct of life which ſuperficial thinkers may be apt to impute to it. His ſyſtem does not take away or make any alteration upon our pleaſures or our pains: Our ſenſations, whether agreeable or diſagreeable, are the ſame upon his ſyſtem as upon any other. Theſe are real things, and the only things that intereſt us. They are produced in us according to certain

CHAP. X. tain laws of nature, by which our conduct
taining the one, and avoiding the other:
to us, whether they are produced immedi
ſome powerful intelligent being upon ou
diation of ſome inanimate being which w

The evidence of an all-governing mind,
ened, ſeems to appear even in a more ſtrik
theſis, than upon the common one. The powers which inanimate matter is ſuppoſed to poſſeſs, have always been the ſtrong hold of Atheiſts, to which they had recourſe in defence of their ſyſtem. This fortreſs of atheiſm muſt be moſt effectually overturned, if there is no ſuch thing as matter in the univerſe. In all this the Biſhop reaſons juſtly and acutely. But there is one uncomfortable conſequence of his ſyſtem, which he ſeems not to have attended to, and from which it will be found difficult, if at all poſſible, to guard it.

The conſequence, I mean, is this, that, although it leaves us ſufficient evidence of a ſupreme intelligent mind, it ſeems to take away all the evidence we have of other intelligent beings like ourſelves. What I call a father, a brother, or a friend, is only a parcel of ideas in my own mind; and being ideas in my mind, they cannot poſſibly have that relation to another mind which they have to mine, any more than the pain felt by me can be the individual pain felt by another. I can find no principle in BERKELEY'S ſyſtem, which affords me even probable ground to conclude, that there are other intelligent beings, like myſelf, in the relations of father, brother, friend, or fellow-citizen. I am left alone, as the only creature of God in the univerſe, in that forlorn ſtate of *egoiſm*, into which it is ſaid ſome of the diſciples of DES CARTES were brought by his philoſophy.

Of all the opinions that have ever been advanced by Philoſophers, this of Biſhop BERKELEY, that there is no material world, ſeems

ſeems the ſtrangeſt, and the moſt apt to bring philoſophy into ridicule with plain men who are guided by the dictates of nature and common ſenſe. And it will not, I apprehend, be improper to trace this progeny of the doctrine of ideas from its origin, and to obſerve its gradual progreſs, till it acquired ſuch ſtrength, that a pious and learned Biſhop had the boldneſs to uſher it into the world, as demonſtrable from the principles of philoſophy univerſally received, and as an admirable expedient for the advancement of knowledge, and for the defence of religion.

During the reign of the Peripatetic philoſophy, men were little diſpoſed to doubt, and much to dogmatize. The exiſtence of the objects of ſenſe was held as a firſt principle; and the received doctrine was, that the ſenſible ſpecies or idea is the very form of the external object, juſt ſeparated from the matter of it, and ſent into the mind that perceives it; ſo that we find no appearance of ſcepticiſm about the exiſtence of matter under that philoſophy.

DES CARTES taught men to doubt even of thoſe things that had been taken for firſt principles. He rejected the doctrine of ſpecies or ideas coming from objects; but ſtill maintained, that what we immediately perceive is not the external object, but an idea or image of it in our mind. This led ſome of his diſciples into egoiſm, and to diſbelieve the exiſtence of every creature in the univerſe but themſelves and their own ideas.

But DES CARTES himſelf, either from dread of the cenſure of the Church, which he took great care not to provoke, or to ſhun the ridicule of the world, which might have cruſhed his ſyſtem at once, as it did that of the Egoiſts; or, perhaps, from inward conviction, was reſolved to ſupport the exiſtence of matter. To do this conſiſtently with his principles, he found himſelf obliged to have recourſe to arguments that are far-fetched, and not very cogent. Sometimes he argues, that our ſenſes are given us by God, who is no deceiver; and therefore we ought to believe their teſti-

CHAP. X. mony. But this argument is weak; becauſe, [redacted] ciples, our ſenſes teſtify no more but that [redacted] And if we draw concluſions from this teſti[redacted] miſes will not ſupport, we deceive ourſelves. [redacted] to this weak argument, he ſometimes adds, [redacted] ture a ſtrong propenſity to believe that ther[redacted] correſponding to our ideas.

MALEBRANCHE thought, that this ſtrong propenſity is not a ſufficient reaſon for believing the exiſtence of matter; and that it is to be received as an article of faith, not certainly diſcoverable by reaſon. He is aware that faith comes by hearing; and that it may be ſaid that prophets, apoſtles, and miracles, are only ideas in our minds. But to this he anſwers, That though theſe things are only ideas, yet faith turns them into realities; and this anſwer, he hopes, will ſatisfy thoſe who are not too moroſe.

It may perhaps ſeem ſtrange, that LOCKE, who wrote ſo much about ideas, ſhould not ſee thoſe conſequences which BERKELEY thought ſo obviouſly deducible from that doctrine. Mr LOCKE ſurely was not willing that the doctrine of ideas ſhould be thought to be loaded with ſuch conſequences. He acknowledges, that the exiſtence of a material world is not to be received as a firſt principle; nor is it demonſtrable; but he offers the beſt arguments for it he can; and ſupplies the weakneſs of his arguments by this obſervation, that we have ſuch evidence, as is ſufficient to direct us in purſuing the good, and avoiding the ill we may receive from external things, beyond which we have no concern.

There is, indeed, a ſingle paſſage in LOCKE's Eſſay, which may lead one to conjecture, that he had a glimpſe of that ſyſtem which BERKELEY afterwards advanced, but thought proper to ſuppreſs it within his own breaſt. The paſſage is in book 4. chap. 10. where, having proved the exiſtence of an eternal intelligent mind, he comes to anſwer thoſe who conceive that matter alſo muſt be eternal;

eternal; becauſe we cannot conceive how it could be made out of nothing: And having obſerved that the creation of minds requires no leſs power than the creation of matter, he adds what follows: "Nay poſſibly, if we could emancipate ourſelves from vulgar no-"tions, and raiſe our thoughts, as far as they would reach, to a "cloſer contemplation of things, we might be able to aim at ſome "dim and ſeeming conception, how matter might at firſt be made, "and begin to exiſt by the power of that eternal firſt Being; but "to give beginning and being to a ſpirit, would be found a more "inconceivable effect of omnipotent power. But this being what "would perhaps lead us too far from the notions on which the "philoſophy now in the world is built, it would not be pardon-"able to deviate ſo far from them, or to enquire, ſo far as gram-"mar itſelf would authoriſe, if the common ſettled opinion op-"poſes it; eſpecially in this place, where the received doctrine "ſerves well enough to our preſent purpoſe."

It appears from this paſſage, *firſt*, That Mr LOCKE had ſome ſyſtem in his mind, perhaps not fully digeſted, to which we might be led, by raiſing our thoughts to a cloſer contemplation of things, and emancipating them from vulgar notions. *Secondly*, That this ſyſtem would lead ſo far from the notions on which the philoſophy now in the world is built, that he thought proper to keep it within his own breaſt. *Thirdly*, That it might be doubted whether this ſyſtem differed ſo far from the common ſettled opinion in reality, as it ſeemed to do in words. *Fourthly*, By this ſyſtem, we might poſſibly be enabled to aim at ſome dim and ſeeming conception how matter might at firſt be made and begin to exiſt; but it would give no aid in conceiving how a ſpirit might be made. Theſe are the characteriſtics of that ſyſtem which Mr LOCKE had in his mind, and thought it prudent to ſuppreſs. May they not lead to a probable conjecture, that it was the ſame, or ſomething ſimilar to that of Biſhop BERKELEY? According to BERKELEY'S ſyſtem, God's creating the material world at ſuch a time, means no more but that he decreed from that time, to produce ideas in the minds

CHAP. X. of finite ſpirits, in that order, and accord
we call the laws of Nature. This, indee
in conceiving how matter was created;
fail to take notice of the advantage of his
But his ſyſtem gives no aid in conceiv
made. It appears therefore, that every
hinted, with regard to that ſyſtem which he had in his mind, but thought it prudent to ſuppreſs, tallies exactly with the ſyſtem of BERKELEY. If we add to this, that BERKELEY's ſyſtem follows from Mr LOCKE's, by very obvious conſequence, it ſeems reaſonable to conjecture, from the paſſage now quoted, that he was not unaware of that conſequence, but left it to thoſe who ſhould come after him to carry his principles their full length, when they ſhould by time be better eſtabliſhed, and able to bear the ſhock of their oppoſition to vulgar notions. Mr NORRIS, in his Eſſay towards the theory of the ideal or intelligible world, publiſhed in 1701, obſerves, that the material world is not an object of ſenſe; becauſe ſenſation is within us, and has no object. Its exiſtence, therefore, he ſays, is a collection of reaſon, and not a very evident one.

From this detail we may learn, that the doctrine of ideas, as it was new modelled by DES CARTES, looked with an unfriendly aſpect upon the material world; and although Philoſophers were very unwilling to give up either, they found it a very difficult taſk to reconcile them to each other. In this ſtate of things BERKELEY, I think, is reputed the firſt who had the daring reſolution to give up the material world altogether, as a ſacrifice to the received philoſophy of ideas.

But we ought not in this hiſtorical ſketch to omit an author of far inferior name, ARTHUR COLLIER, Rector of Langford Magna, near Sarum. He publiſhed a book in 1713, which he calls *Clavis Univerſalis*; or, a new Enquiry after Truth; being a demonſtration of the non-exiſtence or impoſſibility of an external world. His arguments are the ſame in ſubſtance with BERKELEY's; and he

he appears to understand the whole strength of his cause: Though he is not deficient in metaphysical acuteness, his stile is disagreeable, being full of conceits, of new coined words, scholastic terms, and perplexed sentences. He appears to be well acquainted with DES CARTES, MALEBRANCHE, and NORRIS, as well as with ARISTOTLE and the schoolmen: But, what is very strange, it does not appear that he had ever heard of LOCKE's Essay, which had been published twenty-four years, or of BERKELEY's Principles of Knowledge, which had been published three years.

He says, he had been ten years firmly convinced of the non-existence of an external world, before he ventured to publish his book. He is far from thinking as BERKELEY does, that the vulgar are of his opinion. If his book should make any converts to his system, (of which he expresses little hope, though he has supported it by nine demonstrations,) he takes pains to show that his disciples, notwithstanding their opinion, may, with the unenlightened, speak of material things in the common stile. He himself had scruples of conscience about this for some time; and if he had not got over them, he must have shut his lips for ever: But he considered, that God himself has used this stile in speaking to men in the holy scripture, and has thereby sanctified it to all the faithful; and that to the pure all things are pure. He thinks his opinion may be of great use, especially in religion; and applies it in particular, to put an end to the controversy about Christ's presence in the sacrament.

I have taken the liberty to give this short account of COLLIER's book, because I believe it is rare, and little known. I have only seen one copy of it, which is in the University library of Glasgow.

CHAP.

CHAP. XI.

Biſhop BERKELEY'S *Sentiments of the Nature of Ideas.*

I PASS over the ſentiments of Biſhop BERKELEY, with reſpect to abſtract ideas, and with reſpect to ſpace and time, as things which may more properly be conſidered in another place. But I muſt take notice of one part of his ſyſtem, wherein he ſeems to have deviated from the common opinion about ideas.

Though he ſets out in his principles of knowledge by telling us, that it is evident the objects of human knowledge are ideas, and builds his whole ſyſtem upon this principle; yet, in the progreſs of it, he finds that there are certain objects of human knowledge that are not ideas, but things which have a permanent exiſtence. The objects of knowledge, of which we have no ideas, are our own minds, and their various operations, other finite minds, and the Supreme Mind. The reaſon why there can be no ideas of ſpirits and their operations, the author informs us is this, That ideas are paſſive, inert, unthinking beings; they cannot therefore be the image or likeneſs of things that have thought, and will, and active power; we have notions of minds, and of their operations, but not ideas: We know what we mean by thinking, willing, and perceiving; we can reaſon about beings endowed with thoſe powers, but we have no ideas of them. A ſpirit or mind is the only ſubſtance or ſupport wherein the unthinking beings or ideas can exiſt; but that this ſubſtance which ſupports or perceives ideas, ſhould itſelf be an idea, or like an idea, is evidently abſurd.

He obſerves farther, Princip. ſect. 142, that "all relations, including an act of the mind, we cannot properly be ſaid to "have an idea, but rather a notion of the relations or habitudes "between things. But if, in the modern way, the word idea is "extended

" extended to ſpirits, and relations, and acts, this is, after all, an CHAP. XI.
" affair of verbal concern; yet it conduces to clearneſs and propriety, that we diſtinguiſh things very different by different names."

This is an important part of BERKELEY's ſyſtem, and deſerves attention. We are led by it to divide the objects of human knowledge into two kinds: The firſt is ideas, which we have by our five ſenſes; they have no exiſtence when they are not perceived, and exiſt only in the minds of thoſe who perceive them. The ſecond kind of objects comprehends ſpirits, their acts, and the relations and habitudes of things. Of theſe we have notions, but no ideas. No idea can repreſent them, or have any ſimilitude to them: Yet we underſtand what they mean, and we can ſpeak with underſtanding, and reaſon about them, without ideas.

This account of ideas is very different from that which LOCKE has given. In his ſyſtem, we have no knowledge where we have no ideas. Every thought muſt have an idea for its immediate object. In BERKELEY's, the moſt important objects are known without ideas. In LOCKE's ſyſtem, there are two ſources of our ideas, ſenſation and reflection. In BERKELEY's, ſenſation is the only ſource, becauſe of the objects of reflection there can be no ideas. We know them without ideas. LOCKE divides our ideas into thoſe of ſubſtances, modes, and relations. In BERKELEY's ſyſtem, there are no ideas of ſubſtances, or of relations; but notions only. And even in the claſs of modes, the operations of our own minds are things of which we have diſtinct notions; but no ideas.

We ought to do the juſtice to MALEBRANCHE to acknowledge, that in this point, as well as in many others, his ſyſtem comes nearer to BERKELEY's than the latter ſeems willing to own. That author tells us, that there are four different ways in which we come to the knowledge of things. To know things by their ideas, is only one of the four. He affirms, that we have no idea of our own

CHAP. XI. own mind, or any of its modifications: T
things by conſciouſneſs, without ideas. Whe
Philoſophers foreſaw the conſequences that m
the ſyſtem of ideas, taken in its full extent, a
terwards drawn by Mr HUME, I cannot prete
did, their regard to religion was too great t
mit thoſe conſequences, or the principles wi
neceſſarily connected.

However this may be, if there be ſo many
apprehended and known without ideas, this
geſts a ſcruple with regard to thoſe that are
ſaid, If we can apprehend and reaſon about
without ideas, Is it not poſſible that we may apprehend and reaſon about a material world, without ideas? If conſciouſneſs and reflection furniſh us with notions of ſpirits, and of their attributes, without ideas, May not our ſenſes furniſh us with notions of bodies and their attributes, without ideas?

BERKELEY foreſaw this objection to his ſyſtem, and puts it in the mouth of HYLAS, in the following words: Dial. 3. HYLAS. "If you can conceive the mind of God, without having an idea "of it, Why may not I be allowed to conceive the exiſtence of "matter, notwithſtanding that I have no idea of it?" The anſwer of PHILONOUS is, "You neither perceive matter objectively, "as you do an inactive being or idea, nor know it, as you do "yourſelf, by a reflex act, neither do you immediatly apprehend "it by ſimilitude of the one or the other, nor yet collect it by "reaſoning from that which you know immediately. All which "makes the caſe of matter widely different from that of the "Deity."

Though HYLAS declares himſelf ſatisfied with this anſwer, I confeſs I am not: Becauſe, if I may truſt the faculties that God has given me, I do perceive matter objectively, that is, ſomething which

which is extended and ſolid, which may be meaſured and weighed, is the immediate object of my touch and ſight. And this object I take to be matter, and not an idea. And though I have been taught by Philoſophers, that what I immediately touch is an idea, and not matter; yet I have never been able to diſcover this by the moſt accurate attention to my own perceptions.

It were to be wiſhed, that this ingenious author had explained what he means by ideas, as diſtinguiſhed from notions. The word notion, being a word in common language, is well underſtood. All men mean by it, the conception, the apprehenſion, or thought which we have of any object of thought. A notion, therefore, is an act of the mind conceiving or thinking of ſome object. The object of thought may be either ſomething that is in the mind, or ſomething that is not in the mind. It may be ſomething that has no exiſtence, or ſomething that did, or does, or ſhall exiſt. But the notion which I have of that object, is an act of my mind which really exiſts while I think of the object; but has no exiſtence when I do not think of it. The word idea, in popular language, has preciſely the ſame meaning as the word notion. But Philoſophers have another meaning to the word idea; and what that meaning is, I think, is very difficult to ſay.

The whole of Biſhop BERKELEY's ſyſtem depends upon the diſtinction between notions and ideas; and therefore it is worth while to find, if we are able, what thoſe things are which he calls ideas, as diſtinguiſhed from notions.

For this purpoſe, we may obſerve, that he takes notice of two kinds of ideas, the ideas of ſenſe, and the ideas of imagination. "The ideas imprinted on the ſenſes by the Author of Nature, he "ſays, are called real things; and thoſe excited in the imagina-"tion, being leſs regular, vivid and conſtant, are more properly "termed ideas, or images of things, which they copy and repre-"ſent. But then our ſenſations, be they never ſo vivid and di-

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" ſtinct, are nevertheleſs ideas; that is, they
" are perceived by it as truly as the ideas of its
" ideas of ſenſe are allowed to have more reali
" to be more ſtrong, orderly, and coherent, th
" the mind. They are alſo leſs dependent on
" ing ſubſtance which perceives them, in that
" the will of another and more powerful ſpiri
" ideas; and certainly the idea, whether faint
" otherwiſe than in a mind perceiving it." P

From this paſſage we ſee, that, by the idea
thor means ſenſations: And this indeed is evide
paſſages, of which I ſhall mention a few, Princip
" colours, heat and cold, extenſion and figure, in a word, the
" things we ſee and feel, what are they but ſo many ſenſations,
" notions, ideas, or impreſſions on the ſenſe; and is it poſſible to
" ſeparate, even in thought, any of theſe from perception? For
" my part, I might as eaſily divide a thing from itſelf." Sect. 18.
" As for our ſenſes, by them we have the knowledge only of our
" ſenſations, ideas, or thoſe things that are immediately perceived
" by ſenſe; call them what you will: But they do not inform us
" that things exiſt without the mind, or unperceived, like to thoſe
" which are perceived." Sect. 25. " All our ideas, ſenſations, or the
" things which we perceive, by whatever names they may be di-
" ſtinguiſhed, are viſibly inactive; there is nothing of power or
" agency included in them."

This therefore appears certain, that, by the ideas of ſenſe, the author meant the ſenſations we have by means of our ſenſes. I have endeavoured to explain the meaning of the word *ſenſation*, Eſſay 1. chap. 1. and refer to the explication there given of it, which appears to me to be perfectly agreeable to the ſenſe in which Biſhop BERKELEY uſes it.

As there can be no notion or thought but in a thinking being;

ſo

ſo there can be no ſenſation but in a ſentient being. It is the act, or feeling of a ſentient being; its very eſſence conſiſts in its being felt. Nothing can reſemble a ſenſation, but a ſimilar ſenſation in the ſame, or in ſome other mind. To think that any quality in a thing that is inanimate can reſemble a ſenſation, is a great abſurdity. In all this, I cannot but agree perfectly with Biſhop BERKELEY; and I think his notions of ſenſation much more diſtinct and accurate than LOCKE's, who thought that the primary qualities of body are reſemblances of our ſenſations, but that the ſecondary are not.

That we have many ſenſations by means of our external ſenſes, there can be no doubt; and if he is pleaſed to call thoſe, ideas, there ought to be no diſpute about the meaning of a word. But, ſays Biſhop BERKELEY, by our ſenſes, we have the knowledge *only* of our ſenſations or ideas, call them which you will. I allow him to call them which he will; but I would have the word *only* in this ſentence to be well weighed, becauſe a great deal depends upon it.

For if it be true, that, by our ſenſes, we have the knowledge of our ſenſations only, then his ſyſtem muſt be admitted, and the exiſtence of a material world muſt be given up as a dream. No demonſtration can be more invincible than this. If we have any knowledge of a material world, it muſt be by the ſenſes: But, by the ſenſes, we have no knowledge but of our ſenſations only; and our ſenſations have no reſemblance of any thing that can be in a material world. The only propoſition in this demonſtration which admits of doubt is, that, by our ſenſes, we have the knowledge of our ſenſations only, and of nothing elſe. If there are objects of the ſenſes which are not ſenſations, his arguments do not touch them; they may be things which do not exiſt in the mind, as all ſenſations do; they may be things, of which, by our ſenſes, we have notions, though no ideas; juſt as, by conſciouſneſs and reflection, we have notions of ſpirits, and of their operations, without ideas or ſenſations.

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Shall we ſay then, that, by our ſenſes, we h
of our ſenſations only; and that they give us
thing but of our ſenſations? Perhaps this has b
Philoſophers, and not of Biſhop BERKELEY al
would have ſupported it by arguments. Mr L
notions we have by our ſenſes ideas of ſenſatio
been very generally followed. Hence it ſeems
ference, that ideas of ſenſation are ſenſations.
may err: Let us hear the dictates of commo
point.

Suppoſe I am pricked with a pin, I aſk, Is the
ſation? undoubtedly it is. There can be noth
pain in any inanimate being. But I aſk again, Is the pin a ſenſa-
tion? To this queſtion I find myſelf under a neceſſity of anſwer-
ing, That the pin is not a ſenſation, nor can have the leaſt reſem-
blance to any ſenſation. The pin has length and thickneſs, and fi-
gure and weight. A ſenſation can have none of thoſe qualities. I
am not more certain that the pain I feel is a ſenſation, than that
the pin is not a ſenſation; yet the pin is an object of ſenſe; and I
am as certain that I perceive its figure and hardneſs by my ſenſes,
as that I feel pain when pricked by it.

Having ſaid ſo much of the ideas of ſenſe in BERKELEY's ſyſtem,
we are next to conſider the account he gives of the ideas of ima-
gination. Of theſe he ſays, Princip. ſect. 28. "I find I can ex-
"cite ideas in my mind at pleaſure, and vary and ſhift the ſcene as
"oft as I think fit. It is no more than willing; and ſtraightway
"this or that idea ariſes in my fancy; and by the ſame power it
"is obliterated, and makes way for another. This making and
"unmaking of ideas, doth very properly denominate the mind
"active. This much is certain, and grounded on experience.
"Our ſenſations, he ſays, are called real things; the ideas of ima-
"gination are more properly termed ideas, or images of things;"
that is, as I apprehend, they are the images of our ſenſations. It

might

might ſurely be expected, that we ſhould be well acquainted with the ideas of imagination, as they are of our making; yet, after all the Biſhop has ſaid about them, I am at a loſs to know what they are.

I would obſerve, in the *firſt* place, with regard to theſe ideas of imagination, that they are not ſenſations; for ſurely ſenſation is the work of the ſenſes, and not of imagination; and though pain be a ſenſation, the thought of pain, when I am not pained, is no ſenſation.

I obſerve, in the *ſecond* place, that I can find no diſtinction between ideas of imagination and notions, which the author ſays are not ideas. I can eaſily diſtinguiſh between a notion and a ſenſation. It is one thing to ſay I have the ſenſation of pain. It is another thing to ſay I have a notion of pain. The laſt expreſſion ſignifies no more than that I underſtand what is meant by the word *pain*. The firſt ſignifies that I really feel pain. But I can find no diſtinction between the notion of pain, and the imagination of it, or indeed between the notion of any thing elſe, and the imagination of it. I can therefore give no account of the diſtinction which BERKELEY makes between ideas of imagination and notions, which he ſays are not ideas. They ſeem to me perfectly to coincide.

He ſeems indeed to ſay, that the ideas of imagination differ not in kind from thoſe of the ſenſes, but only in the degree of their regularity, vivacity, and conſtancy. "They are, ſays he, leſs re-"gular, vivid, and conſtant." This doctrine was afterwards greedily embraced by Mr HUME, and makes a main pillar of his ſyſtem; but it cannot be reconciled to common ſenſe, to which Biſhop BERKELEY profeſſes a great regard. For, according to this doctrine, if we compare the ſtate of a man racked with the gout, with his ſtate, when being at perfect eaſe, he relates what he has ſuffered; the difference of theſe two ſtates is only this, that, in the

CHAP. XI. the laſt, the pain is leſs regular, vivid, and
firſt. We cannot poſſibly aſſent to this. E
he can relate the pain he ſuffered, not only wi
pleaſure; and that to ſuffer pain, and to th
which totally differ in kind, and not in degr

We ſee, therefore, upon the whole, that acc
of the moſt important objects of knowledge,
their operations, and of the relations of thin
at all; we have notions of them, but not idea
are thoſe of ſenſe, and thoſe of imagination.
ſations we have by means of our ſenſes, wh
can deny, becauſe he is conſcious of them; a
been explained by this author with great accuracy. As to the ideas of imagination, he hath left us much in the dark: He makes them images of our ſenſations, though, according to his own doctrine, nothing can reſemble a ſenſation but a ſenſation. He ſeems to think, that they differ from ſenſations only in the degree of their regularity, vivacity, and conſtancy: But this cannot be reconciled to the experience of mankind; and beſides this mark, which cannot be admitted, he hath given us no other mark by which they may be diſtinguiſhed from notions: Nay, it may be obſerved, that the very reaſon he gives why we can have no ideas of the acts of the mind about its ideas, nor of the relations of things, is applicable to what he calls ideas of imagination. Princip. ſect. 142. "We may not, I think, ſtrictly be ſaid to have an idea of an "active being, or of an action, although we may be ſaid to have "a notion of them. I have ſome knowledge or notion of my "mind, and its acts about ideas, in as much as I know or under-"ſtand what is meant by theſe words. It is alſo to be remarked, "that all relations including an act of the mind, we cannot ſo "properly be ſaid to have an idea, but rather a notion of the rela-"tions and habitudes between things." From this it follows, that our imaginations are not properly ideas but notions, becauſe they include an act of the mind. For he tells us, in a paſſage already

ready quoted, that they are creatures of the mind, of its own framing, and that it makes and unmakes them as it thinks fit, and from this is properly denominated active. If it be a good reaſon why we have not ideas, but notions only of relations, becauſe they include an act of the mind; the ſame reaſon muſt lead us to conclude, that our imaginations are notions and not ideas, ſince they are made and unmade by the mind as it thinks fit, and from this it is properly denominated active.

When ſo much has been written, and ſo many diſputes raiſed, about ideas, it were deſirable that we knew what they are, and to what category or claſs of beings they belong. In this we might expect ſatisfaction in the writings of Biſhop BERKELEY, if any where, conſidering his known accuracy and preciſion in the uſe of words; and it is for this reaſon that I have taken ſo much pains to find out what he took them to be.

After all, if I underſtand what he calls the ideas of ſenſe, they are the ſenſations which we have by means of our five ſenſes; but they are, he ſays, leſs properly termed ideas.

I underſtand likewiſe what he calls notions, but they, ſays he, are very different from ideas, though, in the modern way, often called by that name.

The ideas of imagination remain, which are moſt properly termed ideas, as he ſays; and, with regard to theſe, I am ſtill very much in the dark. When I imagine a lion or an elephant, the lion or elephant is the object imagined. The act of the mind, in conceiving that object, is the notion, the conception, or imagination of the object. If beſides the object, and the act of the mind about it, there be ſomething called the idea of the object, I know not what it is.

If we conſult other authors who have treated of ideas, we ſhall find

CHAP. XI. find as little ſatisfaction with regard to the mea
ſophical term. The vulgar have adopted it; b
by it the notion or conception we have of any
our more abſtract or general notions. When it
nify the operation of the mind about objects
ceiving, remembering, or perceiving, it is well
Philoſophers will have ideas to be the objects of
tions, and not the operations themſelves. Ther
variety of objects of thought. We can think
their operations, of bodies, and of their qualities and relations. If ideas are not comprehended under any of theſe claſſes, I am at a loſs to comprehend what they are.

In ancient philoſophy, ideas were ſaid to be immaterial forms, which, according to one ſyſtem, exiſted from all eternity, and, according to another, are ſent forth from the objects, whoſe form they are. In modern philoſophy, they are things in the mind, which are the immediate objects of all our thoughts, and which have no exiſtence when we do not think of them. They are called the images, the reſemblances, the repreſentatives of external objects of ſenſe; yet they have neither colour, nor ſmell, nor figure, nor motion, nor any ſenſible quality. I revere the authority of Philoſophers, eſpecially where they are ſo unanimous; but until I can comprehend what they mean by ideas, I muſt think and ſpeak with the vulgar.

In ſenſation, properly ſo called, I can diſtinguiſh two things, the mind or ſentient being, and the ſenſation. Whether the laſt is to be called a feeling or an operation, I diſpute not; but it has no object diſtinct from the ſenſation itſelf. If in ſenſation there be a third thing, called an idea, I know not what it is.

In perception, in remembrance, and in conception, or imagination, I diſtinguiſh three things, the mind that operates, the operation of the mind, and the object of that operation. That the object

object perceived is one thing, and the perception of that object another, I am as certain as I can be of any thing. The ſame may be ſaid of conception, of remembrance, of love and hatred, of deſire and averſion. In all theſe, the act of the mind about its object is one thing, the object is another thing. There muſt be an object, real or imaginary, diſtinct from the operation of the mind about it. Now, if in theſe operations the idea be a fourth thing different from the three I have mentioned, I know not what it is, nor have been able to learn from all that has been written about ideas. And if the doctrine of Philoſophers about ideas confounds any two of theſe things which I have mentioned as diſtinct; if, for example, it confounds the object perceived with the perception of that object, and repreſents them as one and the ſame thing, ſuch doctrine is altogether repugnant to all that I am able to diſcover of the operations of my own mind; and it is repugnant to the common ſenſe of mankind, expreſſed in the ſtructure of all languages.

CHAP. XII.

Of the Sentiments of Mr HUME.

TWO volumes of the Treatiſe of human nature were publiſhed in 1739, and the third in 1740. The doctrine contained in this Treatiſe was publiſhed anew in a more popular form in Mr HUME's philoſophical Eſſays, of which there have been various Editions. What other authors, from the time of DES CARTES, had called *ideas*, this author diſtinguiſhes into two kinds, to wit, *impreſſions* and *ideas*; comprehending under the firſt, all our ſenſations, paſſions, and emotions; and under the laſt, the faint images of theſe, when we remember or imagine them.

He ſets out with this, as a principle that needed no proof, and

CHAP. XII. of which therefore he offers none, That all the p[illegible] human mind reſolve themſelves into theſe two [illegible] and *ideas*.

As this propoſition is the foundation upon wh[illegible] Mr HUME's ſyſtem reſts, and from which it is [illegible] acuteneſs indeed, and ingenuity, it were to be wi[illegible] told us upon what authority this fundamental [illegible] But we are left to gueſs, whether it is held forth as a firſt principle, which has its evidence in itſelf; or whether it is to be received upon the authority of Philoſophers.

Mr LOCKE had taught us, that all the immediate objects of human knowledge are ideas in the mind. Biſhop BERKELEY, proceeding upon this foundation, demonſtrated very eaſily, that there is no material world. And he thought, that, for the purpoſes both of philoſophy and religion, we ſhould find no loſs, but great benefit, in the want of it. But the Biſhop, as became his order, was unwilling to give up the world of ſpirits. He ſaw very well, that ideas are as unfit to repreſent ſpirits as they are to repreſent bodies. Perhaps he ſaw, that if we perceive only the ideas of ſpirits, we ſhall find the ſame difficulty in inferring their real exiſtence from the exiſtence of their ideas, as we find in inferring the exiſtence of matter from the idea of it; and therefore, while he gives up the material world in favour of the ſyſtem of ideas, he gives up one half of that ſyſtem in favour of the world of ſpirits; and maintains, that we can, without ideas, think, and ſpeak, and reaſon, intelligibly about ſpirits, and what belongs to them.

Mr HUME ſhows no ſuch partiality in favour of the world of ſpirits. He adopts the theory of ideas in its full extent; and, in conſequence, ſhews that there is neither matter nor mind in the univerſe; nothing but impreſſions and ideas. What we call a *body*, is only a bundle of ſenſations; and what we call the *mind*, is only

only a bundle of thoughts, paſſions, and emotions, without any ſubject. CHAP. XII.

Some ages hence, it will perhaps be looked upon as a curious anecdote, that two Philoſophers of the 18th century, of very diſtinguiſhed rank, were led by a philoſophical hypotheſis; one, to diſbelieve the exiſtence of matter; and the other, to diſbelieve the exiſtence both of matter and of mind. Such an anecdote may not be uninſtructive, if it prove a warning to Philoſophers to beware of hypotheſes, eſpecially when they lead to concluſions which contradict the principles, upon which all men of common ſenſe muſt act in common life.

The Egoiſts, whom we mentioned before, were left far behind by Mr HUME; for they believed their own exiſtence, and perhaps alſo the exiſtence of a Deity. But Mr HUME's ſyſtem does not even leave him a *ſelf* to claim the property of his impreſſions and ideas.

A ſyſtem of conſequences, however abſurd, acutely and juſtly drawn from a few principles, in very abſtract matters, is of real utility in ſcience, and may be made ſubſervient to real knowledge. This merit Mr HUME's metaphyſical writings have in a great degree.

We had occaſion before to obſerve, that, ſince the time of DES CARTES, Philoſophers, in treating of the powers of the mind, have in many inſtances confounded things, which the common ſenſe of mankind has always led them to diſtinguiſh, and which have different names in all languages. Thus, in the perception of an external object, all languages diſtinguiſh three things, the *mind* that perceives, the operation of that mind, which is called *perception*, and the *object* perceived. Nothing appears more evident to a mind untutored by philoſophy, than that theſe three are diſtinct things, which, though related, ought never to be confounded. The ſtruc-

CHAP. XII. ture of all languages ſuppoſes this diſtinction, and is built upon it. Philoſophers have introduced a fourth thing in this proceſs, which they call the *idea* of the object, which is ſuppoſed to be an image, or repreſentative of the object, and is ſaid to be the immediate object. The vulgar know nothing about this idea; it is a creature of philoſophy, introduced to account for, and explain the manner of our perceiving external objects.

It is pleaſant to obſerve, that while Philoſophers, for more than a century, have been labouring, by means of ideas, to explain perception, and the other operations of the mind, thoſe ideas have by degrees uſurped the place of perception, object, and even of the mind itſelf, and have ſupplanted thoſe very things they were brought to explain. DES CARTES reduced all the operations of the underſtanding to perception; and what can be more natural to thoſe who believe that they are only different modes of perceiving ideas in our own minds. LOCKE confounds ideas ſometimes with the perception of an external object, ſometimes with the external object itſelf. In BERKELEY'S ſyſtem the idea is the only object, and yet is often confounded with the perception of it. But in HUME'S, the idea or the impreſſion, which is only a more lively idea, is mind, perception, and object, all in one: So that, by the term perception in Mr HUME'S ſyſtem, we muſt underſtand the mind itſelf, all its operations, both of underſtanding and will, and all the objects of theſe operations. Perception taken in this ſenſe he divides into our more lively perceptions, which he calls *impreſſions*, and the leſs lively, which he calls *ideas*. To prevent repetition, I muſt here refer the reader to ſome remarks made upon this diviſion, Eſſay 1. chap. 1. in the explication there given of the words *perceive*, *object*, *impreſſion*.

Philoſophers have differed very much with regard to the origin of our ideas, or the ſources whence they are derived. The Peripatetics held, that all knowledge is derived originally from the ſenſes; and this ancient doctrine ſeems to be revived by ſome late French

French Philoſophers, and by Dr HARTLEY and Dr PRIESTLY among the Britiſh. DES CARTES maintained, that many of our ideas are innate. LOCKE oppoſed the doctrine of innate ideas with much zeal, and employs the whole firſt book of his Eſſay againſt it. But he admits two different ſources of ideas; the operations of our external ſenſes, which he calls *ſenſation*, by which we get all our ideas of body, and its attributes; and *reflection* upon the operations of our minds, by which we get the ideas of every thing belonging to the mind. The main deſign of the ſecond book of LOCKE's Eſſay, is to ſhow, that all our ſimple ideas, without exception, are derived from the one or the other, or both of theſe ſources. In doing this, the author is led into ſome paradoxes, although, in general, he is not fond of paradoxes: And had he foreſeen all the conſequences that may be drawn from his account of the origin of our ideas, he would probably have examined it more carefully.

Mr HUME adopts LOCKE's account of the origin of our ideas, and from that principle infers, that we have no idea of ſubſtance corporeal or ſpiritual, no idea of power, no other idea of a cauſe, but that it is ſomething antecedent, and conſtantly conjoined to that which we call its effect; and, in a word, that we can have no idea of any thing but our ſenſations, and the operations of mind we are conſcious of.

This author leaves no power to the mind in framing its ideas and impreſſions; and no wonder, ſince he holds that we have no idea of power; and the mind is nothing but that ſucceſſion of impreſſions and ideas of which we are intimately conſcious.

He thinks, therefore, that our impreſſions ariſe from unknown cauſes, and that the impreſſions are the cauſes of their correſponding ideas. By this he means no more but that they always go before the ideas; for this is all that is neceſſary to conſtitute the relation of cauſe and effect.

As

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As to the order and ſucceſſion of our ideas, he [illegible] determined by three laws of attraction or aſſociation, [illegible] takes to be original properties of the ideas, by which [illegible] as it were, or aſſociate themſelves with other ideas [illegible] reſemble them, or which have been contiguous [illegible] and place, or to which they have the relations of [illegible]

We may here obſerve by the way, that the laſt of theſe three laws ſeems to be included in the ſecond, ſince cauſation, according to him, implies no more than contiguity in time and place.

It is not my deſign at preſent to ſhow how Mr HUME, upon the principles he has borrowed from LOCKE and BERKELEY, has with great acuteneſs, reared a ſyſtem of abſolute ſcepticiſm, which leaves no rational ground to believe any one propoſition, rather than its contrary: My intention in this place being only to give a detail of the ſentiments of Philoſophers concerning ideas ſince they became an object of ſpeculation, and concerning the manner of our perceiving external objects by their means.

CHAP. XIII.

Of the Sentiments of ANTONY ARNAULD.

IN this ſketch of the opinions of Philoſophers concerning ideas, we muſt not omit ANTONY ARNAULD, doctor of the Sorbonne, who, in the year 1683, publiſhed his book of True and Falſe Ideas, in oppoſition to the ſyſtem of MALEBRANCHE before mentioned. It is only about ten years ſince I could find this book, and I believe it is rare.

Though ARNAULD wrote before LOCKE, BERKELEY, and HUME, I have reſerved to the laſt place ſome account of his ſentiments, becauſe

becauſe it ſeems difficult to determine whether he adopted the common theory of ideas, or whether he is ſingular in rejecting it altogether as a fiction of Philoſophers. CHAP. XIII.

The controverſy between MALEBRANCHE and ARNAULD neceſſarily led them to conſider what kind of things ideas are, a point upon which other Philoſophers had very generally been ſilent. Both of them profeſſed the doctrine univerſally received, that we perceive not material things immediately, that it is their ideas that are the immediate objects of our thought, and that it is in the idea of every thing that we perceive its properties.

It is neceſſary to premiſe, that both theſe authors uſe the word *perception*, as DES CARTES had done before them, to ſignify every operation of the underſtanding. "To think, to know, to perceive, are the ſame thing," ſays Mr ARNAULD, chap. 5. def. 2. It is likewiſe to be obſerved, that the various operations of the mind are by both called modifications of the mind. Perhaps they were led into this phraſe by the Carteſian doctrine, that the eſſence of the mind conſiſts in thinking, as that of body conſiſts in extenſion. I apprehend, therefore, that when they make ſenſation, perception, memory, and imagination, to be various modifications of the mind, they mean no more, but that theſe are things which can only exiſt in the mind as their ſubject. We expreſs the ſame thing, by calling them various modes of thinking, or various operations of the mind.

The things which the mind perceives, ſays MALEBRANCHE, are of two kinds. They are either in the mind itſelf, or they are external to it. The things in the mind, are all its different modifications, its ſenſations, its imaginations, its pure intellections, its paſſions and affections. Theſe are immediately perceived; we are conſcious of them, and have no need of ideas to repreſent them to us.

Things

CHAP. XIII. Things external to the mind, are either corporeal or ſpiritual. With regard to the laſt, he thinks it poſſible, that, in another ſtate, ſpirits may be an immediate object of our underſtandings, and ſo be perceived without ideas; that there may be ſuch an union of ſpirits as that they may immediately perceive each other, and communicate their thoughts mutually, without ſigns, and without ideas.

But leaving this as a problematical point, he holds it to be undeniable, that material things cannot be perceived immediately, but only by the mediation of ideas. He thought it likewiſe undeniable, that the idea muſt be immediately preſent to the mind, that it muſt touch the ſoul as it were, and modify its perception of the object.

From theſe principles we muſt neceſſarily conclude, either that the idea is ſome modification of the human mind, or that it muſt be an idea in the Divine Mind, which is always intimately preſent with our minds. The matter being brought to this alternative, MALEBRANCHE conſiders firſt all the poſſible ways ſuch a modification may be produced in our mind as that we call an idea of a material object, taking it for granted always, that it muſt be an object perceived, and ſomething different from the act of the mind in perceiving it. He finds inſuperable objections againſt every hypotheſis of ſuch ideas being produced in our minds, and therefore concludes, that the immediate objects of perception are the ideas of the Divine Mind.

Againſt this ſyſtem ARNAULD wrote his book of True and Falſe Ideas. He does not object to the alternative mentioned by MALEBRANCHE; but he maintains, that ideas are modifications of our minds. And finding no other modification of the human mind which can be called the idea of an external object, he ſays it is only another word for perception. Chap. 5. def. 3. "I take the "idea

" idea of an object, and the perception of an object, to be the CHAP XIII.
" ſame thing. I do not ſay whether there may be other things
" to which the name of idea may be given. But it is certain
" that there are ideas taken in this ſenſe, and that theſe ideas
" are either attributes or modifications of our minds."

This, I think indeed, was to attack the ſyſtem of MALEBRANCHE upon its weak ſide, and where, at the ſame time, an attack was leaſt expected. Philoſophers had been ſo unanimous in maintaining that we do not perceive external objects immediately, but by certain repreſentative images of them called *ideas*, that MALEBRANCHE might well think his ſyſtem ſecure upon that quarter, and that the only queſtion to be determined was, In what ſubject thoſe ideas are placed, whether in the human or in the divine mind?

But, ſays Mr ARNAULD, thoſe ideas are mere chimeras, fictions of Philoſophers; there are no ſuch beings in nature; and therefore it is to no purpoſe to enquire whether they are in the divine or in the human mind. The only true and real ideas are our perceptions, which are acknowledged by all Philoſophers, and by MALEBRANCHE himſelf, to be acts or modifications of our own minds. He does not ſay that the fictitious ideas were a fiction of MALEBRANCHE. He acknowledges that they had been very generally maintained by the ſcholaſtic Philoſophers, and points out, very judiciouſly, the prejudices that had led them into the belief of ſuch ideas.

Of all the powers of our mind, the external ſenſes are thought to be the beſt underſtood, and their objects are the moſt familiar. Hence we meaſure other powers by them, and transfer to other powers the language which properly belongs to them. The objects of ſenſe muſt be preſent to the ſenſe, or within its ſphere, in order to their being perceived. Hence, by analogy, we are led to ſay of every thing when we think of it, that it is preſent

CHAP. XIII. to the mind, or in the mind. But this preſence is metaphorical, or analogical only; and ARNAULD calls it objective preſence, to diſtinguiſh it from that local preſence which is required in objects that are perceived by ſenſe. But both being called by the ſame name, they are confounded together, and thoſe things that belong only to real or local preſence, are attributed to the metaphorical.

We are likewiſe accuſtomed to ſee objects by their images in a mirror, or in water; and hence are led, by analogy, to think that objects may be preſented to the memory or imagination, in ſome ſimilar manner, by images, which Philoſophers have called *ideas*.

By ſuch prejudices and analogies, ARNAULD conceives, men have been led to believe, that the objects of memory and imagination muſt be preſented to the mind by images or ideas; and the Philoſophers have been more carried away by theſe prejudices than even the vulgar, becauſe the uſe made of this theory was to explain and account for the various operations of the mind, a matter in which the vulgar take no concern.

He thinks, however, that DES CARTES had got the better of theſe prejudices, and that he uſes the word idea as ſignifying the ſame thing with perception, and is therefore ſurpriſed that a diſciple of DES CARTES, and one who was ſo great an admirer of him as MALEBRANCHE was, ſhould be carried away by them. It is ſtrange, indeed, that the two moſt eminent diſciples of DES CARTES, and his cotemporaries, ſhould differ ſo eſſentially with regard to his doctrine concerning ideas.

I ſhall not attempt to give the reader an account of the continuation of this controverſy between thoſe two acute Philoſophers, in the ſubſequent defences and replies; becauſe I have not acceſs to ſee them. After much reaſoning, and ſome animoſity, each continued in his own opinion, and left his antagoniſt where he found

found him. MALEBRANCHE's opinion of our ſeeing all things in God, ſoon died away of itſelf; and ARNAULD's notion of ideas ſeems to have been leſs regarded than it deſerved, by the Philoſophers that came after him; perhaps for this reaſon, among others, that it ſeemed to be in ſome ſort given up by himſelf, in his attempting to reconcile it to the common doctrine concerning ideas.

From the account I have given, one would be apt to conclude that ARNAULD totally denied the exiſtence of ideas, in the philoſophical ſenſe of that word, and that he adopted the notion of the vulgar, who acknowledge no object of perception but the external object. But he ſeems very unwilling to deviate ſo far from the common track, and what he had given up with one hand he takes back with the other.

For, *firſt*, Having defined ideas to be the ſame thing with perceptions, he adds this qualification to his definition: "I do not "here conſider whether there are other things that may be called "ideas; but it is certain there are ideas taken in this ſenſe." I believe, indeed, there is no Philoſopher who does not, on ſome occaſions, uſe the word idea in this popular ſenſe.

Secondly, He ſupports this popular ſenſe of the word by the authority of DES CARTES, who, in his demonſtration of the exiſtence of God from the idea of him in our minds, defines an idea thus: "By the word *idea*, I underſtand that form of any thought, "by the immediate perception of which I am conſcious of that "thought; ſo that I can expreſs nothing by words, with under-"ſtanding, without being certain that there is in my mind the "idea of that which is expreſſed by the words." This definition ſeems indeed to be of the ſame import with that which is given by ARNAULD. But DES CARTES adds a qualification to it, which ARNAULD, in quoting it, omits; and which ſhews, that DES CARTES meant to limit his definition to the idea then treated of, that is, to the idea of the Deity; and that there are other ideas

CHAP. XIII. to which this definition does not apply. For he adds: "And thus "I give the name of idea, not ſolely to the images painted in the "phantaſy. Nay, in this place, I do not at all give the name of "ideas to thoſe images, in ſo far as they are painted in the corpo- "real phantaſy that is in ſome part of the brain, but only in ſo "far as they inform the mind, turning its attention to that part "of the brain."

Thirdly, ARNAULD has employed the whole of his ſixth chapter, to ſhew that theſe ways of ſpeaking, common among Philoſophers, to wit, *that we perceive not things immediately; that it is their ideas that are the immediate objects of our thoughts; that it is in the idea of every thing that we perceive its properties*, are not to be rejected, but are true when rightly underſtood. He labours to reconcile theſe expreſſions to his own definition of ideas, by obſerving, that every perception and every thought is neceſſarily conſcious of itſelf, and reflects upon itſelf; and that, by this conſciouſneſs and reflection, it is its own immediate object. Whence he infers, that the idea, that is, the perception, is the immediate object of perception.

This looks like a weak attempt to reconcile two inconſiſtent doctrines by one who wiſhes to hold both. It is true, that conſciouſneſs always goes along with perception; but they are different operations of the mind, and they have their different objects. Conſciouſneſs is not perception, nor is the object of conſciouſneſs the object of perception. The ſame may be ſaid of every operation of mind that has an object. Thus, injury is the object of reſentment. When I reſent an injury, I am conſcious of my reſentment; that is, my reſentment is the immediate and the only object of my conſciouſneſs; but it would be abſurd to infer from this, that my reſentment is the immediate object of my reſentment.

Upon the whole, if ARNAULD, in conſequence of his doctrine, that ideas, taken for repreſentative images of external objects, are

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a mere fiction of the Philoſophers, had rejected boldly the doctrine of DES CARTES, as well as of the other Philoſophers, concerning thoſe fictitious beings, and all the ways of ſpeaking that imply their exiſtence, I ſhould have thought him more conſiſtent with himſelf, and his doctrine concerning ideas more rational and more intelligible than that of any other author of my acquaintance who has treated of the ſubject.

CHAP. XIV.

Reflections on the common Theory of Ideas.

AFTER ſo long a detail of the ſentiments of Philoſophers, ancient and modern, concerning ideas, it may ſeem preſumptuous to call in queſtion their exiſtence. But no philoſophical opinion, however ancient, however generally received, ought to reſt upon authority. There is no preſumption in requiring evidence for it, or in regulating our belief by the evidence we can find.

To prevent miſtakes, the reader muſt again be reminded, that if by ideas are meant only the acts or operations of our minds in perceiving, remembering, or imagining objects, I am far from calling in queſtion the exiſtence of thoſe acts; we are conſcious of them every day, and every hour of life; and I believe no man of a ſound mind ever doubted of the real exiſtence of the operations of mind, of which he is conſcious. Nor is it to be doubted, that, by the faculties which God has given us, we can conceive things that are abſent, as well as perceive thoſe that are within the reach of our ſenſes; and that ſuch conceptions may be more or leſs diſtinct, and more or leſs lively and ſtrong. We have reaſon to aſcribe to the all-knowing and all-perfect Being diſtinct conceptions of all things exiſtent and poſſible, and of all their relations; and if theſe conceptions are called his eternal ideas, there ought to

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to be no diſpute among Philoſophers about a word. The ideas, of whoſe exiſtence I require the proof, are not the operations of any mind, but ſuppoſed objects of thoſe operations. They are not perception, remembrance, or conception, but things that are ſaid to be perceived, or remembered, or imagined.

Nor do I diſpute the exiſtence of what the vulgar call the objects of perception. Theſe, by all who acknowledge their exiſtence, are called real things, not ideas. But Philoſophers maintain, that, beſides theſe, there are immediate objects of perception in the mind itſelf: That, for inſtance, we do not ſee the ſun immediately, but an idea; or, as Mr HUME calls it, an impreſſion, in our own minds. This idea is ſaid to be the image, the reſemblance, the repreſentative of the ſun, if there be a ſun. It is from the exiſtence of the idea that we muſt infer the exiſtence of the ſun. But the idea, being immediately perceived, there can be no doubt, as Philoſophers think, of its exiſtence.

In like manner, when I remember, or when I imagine any thing, all men acknowledge that there muſt be ſomething that is remembered, or that is imagined; that is, ſome object of thoſe operations. The object remembered muſt be ſomething that did exiſt in time paſt. The object imagined may be ſomething that never exiſted. But, ſay the Philoſophers, beſides theſe objects which all men acknowledge, there is a more immediate object which really exiſts in the mind at the ſame time we remember or imagine. This object is an idea or image of the thing remembered or imagined.

The *firſt* reflection I would make on this philoſophical opinion is, That it is directly contrary to the univerſal ſenſe of men who have not been inſtructed in philoſophy. When we ſee the ſun or moon, we have no doubt that the very objects which we immediately ſee, are very far diſtant from us, and from one another. We have not the leaſt doubt that this is the ſun and moon which God created ſome thouſands of years ago, and which have continued to perform

perform their revolutions in the heavens ever ſince. But how are we aſtoniſhed when the Philoſopher informs us, that we are miſtaken in all this; that the ſun and moon which we ſee, are not, as we imagine, many miles diſtant from us, and from each other, but that they are in our own mind; that they had no exiſtence before we ſaw them, and will have none when we ceaſe to perceive and to think of them; becauſe the objects we perceive are only ideas in our own minds, which can have no exiſtence a moment longer than we think of them.

If a plain man, uninſtructed in philoſophy, has faith to receive theſe myſteries, how great muſt be his aſtoniſhment. He is brought into a new world where every thing he ſees, taſtes, or touches, is an idea; a fleeting kind of being which he can conjure into exiſtence, or can annihilate in the twinkling of an eye.

After his mind is ſomewhat compoſed, it will be natural for him to aſk his philoſophical inſtructor, Pray, Sir, are there then no ſubſtantial and permanent beings called the ſun and moon, which continue to exiſt whether we think of them or not?

Here the Philoſophers differ. Mr Locke, and thoſe that were before him, will anſwer to this queſtion, That it is very true, there are ſubſtantial and permanent beings called the ſun and moon; but they never appear to us in their own perſon, but by their repreſentatives, the ideas in our own minds, and we know nothing of them but what we can gather from thoſe ideas.

Biſhop Berkeley and Mr Hume would give a different anſwer to the queſtion propoſed: They would aſſure the queriſt, that it is a vulgar error, a mere prejudice of the ignorant and unlearned, to think that there are any permanent and ſubſtantial beings called the ſun and moon; that the heavenly bodies, our own bodies, and all bodies whatſoever, are nothing but ideas in our minds; and that there can be nothing like the ideas of one mind, but the ideas

CHAP. XIV. ideas of another mind. There is nothing in nature but minds and ideas, ſays the Biſhop, nay, ſays Mr HUME, there is nothing in nature but ideas only; for what we call a mind is nothing but a train of ideas connected by certain relations between themſelves.

In this repreſentation of the theory of ideas, there is nothing exaggerated or miſrepreſented, as far as I am able to judge; and ſurely nothing farther is neceſſary to ſhew, that, to the uninſtructed in philoſophy, it muſt appear extravagant and viſionary, and moſt contrary to the dictates of common underſtanding.

There is the leſs need of any farther proof of this, that it is very amply acknowledged by Mr HUME in his Eſſay on the academical or ſceptical Philoſophy. " It ſeems evident, ſays he, that men are " carried by a natural inſtinct, or prepoſſeſſion, to repoſe faith in " their ſenſes; and that without any reaſoning, or even almoſt " before the uſe of reaſon, we always ſuppoſe an external univerſe, " which depends not on our perception, but would exiſt though " we and every ſenſible creature were abſent or annihilated. Even " the animal creation are governed by a like opinion, and preſerve " this belief of external objects in all their thoughts, deſigns, and " actions."

" It ſeems alſo evident, that when men follow this blind and " powerful inſtinct of nature, they always ſuppoſe the very images " preſented by the ſenſes to be the external objects, and never en- " tertain any ſuſpicion, that the one are nothing but repreſenta- " tions of the other. This very table which we ſee white, and " feel hard, is believed to exiſt independent of our perception, and " to be ſomething external to the mind which perceives it; our " preſence beſtows not being upon it; our abſence annihilates it " not: It preſerves its exiſtence uniform and entire, independent " of the ſituation of intelligent beings who perceive or contem- " plate it."

" But

" But this univerſal and primary notion of all men is ſoon de-
" ſtroyed by the ſlighteſt philoſophy, which teaches us, that no-
" thing can ever be preſent to the mind, but an image or percep-
" tion; and that the ſenſes are only the inlets through which theſe
" images are received, without being ever able to produce any
" immediate intercourſe between the mind and the object."

It is therefore acknowledged by this Philoſopher, to be a natural inſtinct or prepoſſeſſion, an univerſal and primary opinion of all men, a primary inſtinct of nature, that the objects which we immediately perceive by our ſenſes, are not images in our minds, but external objects, and that their exiſtence is independent of us, and our perception.

In this acknowledgment, Mr HUME indeed ſeems to me more generous, and even more ingenuous than Biſhop BERKELEY, who would perſuade us, that his opinion does not oppoſe the vulgar opinion, but only that of the Philoſophers; and that the external exiſtence of a material world is a philoſophical hypotheſis, and not the natural dictate of our perceptive powers. The Biſhop ſhows a timidity of engaging ſuch an adverſary, as a primary and univerſal opinion of all men. He is rather fond to court its patronage. But the Philoſopher intrepidly gives a defiance to this antagoniſt, and ſeems to glory in a conflict that was worthy of his arm. *Optat aprum aut fulvum deſcendere monte leonem.* After all, I ſuſpect that a Philoſopher, who wages war with this adverſary, will find himſelf in the ſame condition as a Mathematician who ſhould undertake to demonſtrate, that there is no truth in the axioms of mathematics.

A *ſecond* reflection upon this ſubject is, That the authors who have treated of ideas, have generally taken their exiſtence for granted, as a thing that could not be called in queſtion; and ſuch arguments as they have mentioned incidentally, in order to prove it, ſeem too weak to ſupport the concluſion.

CHAP. XIV.

Mr LOCKE, in the introduction to his Eſſay, tells us, that he uſes the word idea to ſignify whatever is the immediate object of thought; and then adds, "I preſume it will be eaſily granted me "that there are ſuch ideas in mens minds; every one is conſcious "of them in himſelf, and mens words and actions will ſatisfy him "that they are in others." I am indeed conſcious of perceiving, remembering, imagining; but that the objects of theſe operations are images in my mind, I am not conſcious. I am ſatisfied by mens words and actions, that they often perceive the ſame objects which I perceive, which could not be, if thoſe objects were ideas in their own minds.

Mr NORRIS is the only author I have met with, who profeſſedly puts the queſtion, Whether material things can be perceived by us immediately? He has offered four arguments to ſhow that they cannot. *Firſt*, "Material objects are without the mind, and therefore there can be no union between the object and the percipient." *Anſwer*, This argument is lame, until it is ſhown to be neceſſary that in perception there ſhould be a union between the object and the percipient. *Second*, "Material objects are diſproportioned to "the mind, and removed from it by the whole diameter of Being." This argument I cannot anſwer, becauſe I do not underſtand it. *Third*, "Becauſe, if material objects were immediate objects of "perception, there could be no phyſical ſcience; things neceſſary "and immutable being the only object of ſcience." *Anſwer*, Although things neceſſary and immutable be not the immediate objects of perception, they may be immediate objects of other powers of the mind. *Fourth*, "If material things were perceived by "themſelves, they would be a true light to our minds, as being "the intelligible form of our underſtandings, and conſequently "perfective of them, and indeed ſuperior to them." If I comprehend any thing of this myſterious argument, it follows from it, that the Deity perceives nothing at all, becauſe nothing can be ſuperior to his underſtanding, or perfective of it.

There

There is an argument which is hinted at by MALEBRANCHE, and by ſeveral other authors, which deſerves to be more ſeriouſly conſidered. As I find it moſt clearly expreſſed, and moſt fully urged by Dr SAMUEL CLARKE, I ſhall give it in his words, in his ſecond reply to LEIBNITZ, ſect. 4. " The ſoul, without being pre- " ſent to the images of the things perceived, could not poſſibly " perceive them. A living ſubſtance can only there perceive, " where it is preſent, either to the things themſelves, (as the om- " nipreſent God is to the whole univerſe), or to the images of " things, as the ſoul is in its proper *ſenſorium*." CHAP. XIV.

Sir ISAAC NEWTON expreſſes the ſame ſentiment, but with his uſual reſerve, in a query only.

The ingenious Dr PORTERFIELD, in his Eſſay concerning the motions of our eyes, adopts this opinion with more confidence. His words are: " How body acts upon mind, or mind upon " body, I know not; but this I am very certain of, that " nothing can act, or be acted upon, where it is not; and " therefore our mind can never perceive any thing but its own " proper modifications, and the various ſtates of the ſenſorium, " to which it is preſent: So that it is not the external ſun and " moon which are in the heavens, which our mind perceives, but " only their image or repreſentation impreſſed upon the ſenſorium. " How the ſoul of a ſeeing man ſees theſe images, or how it re- " ceives thoſe ideas, from ſuch agitations in the ſenſorium, I know " not; but I am ſure it can never perceive the external bodies " themſelves, to which it is not preſent."

Theſe, indeed, are great authorities; but, in matters of philoſophy, we muſt not be guided by authority, but by reaſon. Dr CLARKE, in the place cited, mentions ſlightly, as the reaſon of his opinion, that " nothing can any more act, or be acted upon, " when it is not preſent, than it can be where it is not." And again, in his third reply to LEIBNITZ, ſect. 11. " We are ſure

CHAP. XIV. " the ſoul cannot perceive what it is not preſent to, becauſe no-
" thing can act, or be acted upon, where it is not." The ſame reaſon we ſee is urged by Dr PORTERFIELD.

That nothing can act immediately where it is not, I think muſt be admitted; for I agree with Sir ISAAC NEWTON, that power without ſubſtance is inconceivable. It is a conſequence of this, that nothing can be acted upon immediately where the agent is not preſent: Let this therefore be granted. To make the reaſoning concluſive, it is farther neceſſary, that, when we perceive objects, either they act upon us, or we act upon them. This does not appear ſelf-evident, nor have I ever met with any proof of it. I ſhall briefly offer the reaſons why I think it ought not to be admitted.

When we ſay that one being acts upon another, we mean that ſome power or force is exerted by the agent, which produces, or has a tendency to produce, a change in the thing acted upon. If this be the meaning of the phraſe, as I conceive it is, there appears no reaſon for aſſerting, that, in perception, either the object acts upon the mind, or the mind upon the object.

An object, in being perceived, does not act at all. I perceive the walls of the room where I ſit; but they are perfectly inactive, and therefore act not upon the mind. To be perceived, is what Logicians call an external denomination, which implies neither action nor quality in the object perceived. Nor could men ever have gone into this notion, that perception is owing to ſome action of the object upon the mind, were it not, that we are ſo prone to form our notions of the mind from ſome ſimilitude we conceive between it and body. Thought in the mind is conceived to have ſome analogy to motion in a body: And as a body is put in motion, by being acted upon by ſome other body; ſo we are apt to think the mind is made to perceive, by ſome impulſe it receives from the object. But reaſonings, drawn from ſuch analogies, ought

ought never to be truſted. They are, indeed, the cauſe of moſt of our errors with regard to the mind. And we might as well conclude, that minds may be meaſured by feet and inches, or weighed by ounces and drachms, becauſe bodies have thoſe properties. CHAP. XIV.

I ſee as little reaſon, in the ſecond place, to believe, that in perception the mind acts upon the object. To perceive an object is one thing; to act upon it is another: Nor is the laſt at all included in the firſt. To ſay, that I act upon the wall, by looking at it, is an abuſe of language, and has no meaning. Logicians diſtinguiſh two kinds of operations of mind; the firſt kind produces no effect without the mind; the laſt does. The firſt they call *immanent acts*, the ſecond *tranſitive*. All intellectual operations belong to the firſt claſs; they produce no effect upon any external object. But without having recourſe to logical diſtinctions, every man of common ſenſe knows, that to think of an object, and to act upon it, are very different things.

As we have therefore no evidence, that, in perception, the mind acts upon the object, or the object upon the mind, but ſtrong reaſons to the contrary; Dr CLARKE's argument againſt our perceiving external objects immediately falls to the ground.

This notion, that, in perception, the object muſt be contiguous to the percipient, ſeems, with many other prejudices, to be borrowed from analogy. In all the external ſenſes, there muſt, as has been before obſerved, be ſome impreſſion made upon the organ of ſenſe by the object, or by ſomething coming from the object. An impreſſion ſuppoſes contiguity. Hence we are led by analogy to conceive ſomething ſimilar in the operations of the mind. Many Philoſophers reſolve almoſt every operation of mind into impreſſions and feelings, words manifeſtly borrowed from the ſenſe of touch. And it is very natural to conceive contiguity neceſſary between that which makes the impreſſion, and that which receives

CHAP. XIV. receives it; between that which feels, and that which is felt. And though no Philoſopher will now pretend to juſtify ſuch analogical reaſoning as this; yet it has a powerful influence upon the judgment, while we contemplate the operations of our minds, only as they appear through the deceitful medium of ſuch analogical notions and expreſſions.

When we lay aſide thoſe analogies, and reflect attentively upon our perception of the objects of ſenſe, we muſt acknowledge, that, though we are conſcious of perceiving objects, we are altogether ignorant how it is brought about; and know as little how we perceive objects as how we were made. And if we ſhould admit an image in the mind, or contiguous to it, we know as little how perception may be produced by this image as by the moſt diſtant object. Why therefore ſhould we be led, by a theory which is neither grounded on evidence, nor, if admitted, can explain any one phænomenon of perception, to reject the natural and immediate dictates of thoſe perceptive powers, to which, in the conduct of life, we find a neceſſity of yielding implicit ſubmiſſion?

There remains only one other argument that I have been able to find urged againſt our perceiving external objects immediately. It is propoſed by Mr HUME, who, in the Eſſay already quoted, after acknowledging that it is an univerſal and primary opinion of all men, that we perceive external objects immediately, ſubjoins what follows.

" But this univerſal and primary opinion of all men is ſoon de-
" ſtroyed by the ſlighteſt philoſophy, which teaches us, that no-
" thing can ever be preſent to the mind but an image or percep-
" tion; and that the ſenſes are only the inlets through which theſe
" images are received, without being ever able to produce any im-
" mediate intercourſe between the mind and the object. The
" table, which we ſee, ſeems to diminiſh as we remove farther
" from it: But the real table, which exiſts independent of us, ſuf-
" fers

" fers no alteration. It was therefore nothing but its image which CHAP. XIV.
" was preſent to the mind. Theſe are the obvious dictates of rea-
" ſon; and no man who reflects, ever doubted that the exiſtences
" which we conſider, when we ſay *this houſe*, and *that tree*, are no-
" thing but perceptions in the mind, and fleeting copies and re-
" preſentations of other exiſtences, which remain uniform and in-
" dependent. So far then, we are neceſſitated, by reaſoning, to
" depart from the primary inſtincts of nature, and to embrace a
" new ſyſtem with regard to the evidence of our ſenſes."

We have here a remarkable conflict between two contradictory opinions, wherein all mankind are engaged. On the one ſide ſtand all the vulgar, who are unpractiſed in philoſophical reſearches, and guided by the uncorrupted primary inſtincts of nature. On the other ſide, ſtand all the Philoſophers ancient and modern; every man without exception who reflects. In this diviſion, to my great humiliation, I find myſelf claſſed with the vulgar.

The paſſage now quoted is all I have found in Mr HUME's writings upon this point; and indeed there is more reaſoning in it than I have found in any other author; I ſhall therefore examine it minutely.

Firſt, He tells us, That " this univerſal and primary opinion of all
" men is ſoon deſtroyed by the ſlighteſt philoſophy, which teaches
" us, that nothing can ever be preſent to the mind but an image
" or perception."

The phraſe of being preſent to the mind has ſome obſcurity; but I conceive he means being an immediate object of thought; an immediate object, for inſtance, of perception, of memory, or of imagination. If this be the meaning, (and it is the only pertinent one I can think of), there is no more in this paſſage but an aſſertion of the propoſition to be proved, and an aſſertion that philoſophy teaches it. If this be ſo, I beg leave to diſſent from philoſophy till

CHAP. XIV. till ſhe gives me reaſon for what ſhe teaches. For though common ſenſe and my external ſenſes demand my aſſent to their dictates upon their own authority, yet philoſophy is not entitled to this privilege. But that I may not diſſent from ſo grave a perſonage without giving a reaſon, I give this as the reaſon of my diſſent. I ſee the ſun when he ſhines; I remember the battle of Culloden; and neither of theſe objects is an image or perception.

He tells us in the next place, "That the ſenſes are only the in-"lets through which theſe images are received."

I know that ARISTOTLE and the ſchoolmen taught, that images or ſpecies flow from objects, and are let in by the ſenſes, and ſtrike upon the mind; but this has been ſo effectually refuted by DES CARTES, by MALEBRANCHE, and many others, that nobody now pretends to defend it. Reaſonable men conſider it as one of the moſt unintelligible and unmeaning parts of the ancient ſyſtem. To what cauſe is it owing that modern Philoſophers are ſo prone to fall back into this hypotheſis, as if they really believed it? For of this proneneſs I could give many inſtances beſides this of Mr HUME; and I take the cauſe to be, that images in the mind, and images let in by the ſenſes, are ſo nearly allied, and ſo ſtrictly connected, that they muſt ſtand or fall together. The old ſyſtem conſiſtently maintained both: But the new ſyſtem has rejected the doctrine of images let in by the ſenſes, holding, nevertheleſs, that there are images in the mind; and, having made this unnatural divorce of two doctrines which ought not to be put aſunder, that which they have retained often leads them back involuntarily to that which they have rejected.

Mr HUME ſurely did not ſeriouſly believe that an image of ſound is let in by the ear, an image of ſmell by the noſe, an image of hardneſs and ſoftneſs, of ſolidity and reſiſtance, by the touch. For, beſides the abſurdity of the thing, which has often been ſhown, Mr HUME, and all modern Philoſophers maintain, that the

images

images which are the immediate objects of perception have no existence when they are not perceived; whereas, if they were let in by the ſenſes, they muſt be, before they are perceived, and have a ſeparate exiſtence.

He tells us farther, that philoſophy teaches, that the ſenſes are unable to produce any immediate intercourſe between the mind and the object. Here, I ſtill require the reaſons that philoſophy gives for this; for, to my apprehenſion, I immediately perceive external objects, and this I conceive is the immediate intercourſe here meant.

Hitherto I ſee nothing that can be called an argument. Perhaps it was intended only for illuſtration. The argument, the only argument follows:

The table which we ſee, ſeems to diminiſh as we remove farther from it; but the real table which exiſts independent of us ſuffers no alteration: It was therefore nothing but its image which was preſented to the mind. Theſe are the obvious dictates of reaſon.

To judge of the ſtrength of this argument, it is neceſſary to attend to a diſtinction which is familiar to thoſe who are converſant in the mathematical ſciences, I mean the diſtinction between real and apparent magnitude. The real magnitude of a line is meaſured by ſome known meaſure of length, as inches, feet, or miles: The real magnitude of a ſurface or ſolid, by known meaſures of ſurface or of capacity. This magnitude is an object of touch only, and not of ſight; nor could we even have had any conception of it, without the ſenſe of touch; and Biſhop BERKELEY, on that account, calls it *tangible magnitude.*

Apparent magnitude is meaſured by the angle which an object ſubtends at the eye. Suppoſing two right lines drawn from the eye to the extremities of the object making an angle, of which the

CHAP. XIV. object is the ſubtenſe, the apparent magnitude is meaſured by this angle. This apparent magnitude is an object of ſight, and not of touch. Biſhop BERKELEY calls it *viſible magnitude*.

If it is aſked, what is the apparent magnitude of the ſun's diameter? the anſwer is, that it is about thirty-one minutes of a degree. But if it is aſked, what is the real magnitude of the ſun's diameter? the anſwer muſt be, ſo many thouſand miles, or ſo many diameters of the earth. From which it is evident, that real magnitude, and apparent magnitude, are things of a different nature, though the name of magnitude is given to both. The firſt has three dimenſions, the laſt only two. The firſt is meaſured by a line, the laſt by an angle.

From what has been ſaid, it is evident that the real magnitude of a body muſt continue unchanged, while the body is unchanged. This we grant. But is it likewiſe evident, that the apparent magnitude muſt continue the ſame while the body is unchanged? So far otherwiſe, that every man who knows any thing of mathematics can eaſily demonſtrate, that the ſame individual object, remaining in the ſame place, and unchanged, muſt neceſſarily vary in its apparent magnitude, according as the point from which it is ſeen is more or leſs diſtant; and that its apparent length or breadth will be nearly in a reciprocal proportion to the diſtance of the ſpectator. This is as certain as the principles of geometry.

We muſt likewiſe attend to this, that though the real magnitude of a body is not originally an object of ſight, but of touch, yet we learn by experience to judge of the real magnitude in many caſes by ſight. We learn by experience to judge of the diſtance of a body from the eye within certain limits; and from its diſtance and apparent magnitude taken together, we learn to judge of its real magnitude.

And this kind of judgment, by being repeated every hour, and almoſt

almoſt every minute of our lives, becomes, when we are grown up, CHAP. XIV.
ſo ready and ſo habitual, that it very much reſembles the original perceptions of our ſenſes, and may not improperly be called *acquired perception.*

Whether we call it judgment or acquired perception is a verbal difference. But it is evident, that, by means of it, we often diſcover by one ſenſe things which are properly and naturally the objects of another. Thus I can ſay without impropriety, I hear a drum, I hear a great bell, or I hear a ſmall bell; though it is certain that the figure or ſize of the ſounding body is not originally an object of hearing. In like manner, we learn by experience how a body of ſuch a real magnitude, and at ſuch a diſtance appears to the eye: But neither its real magnitude, nor its diſtance from the eye, are properly objects of ſight, any more than the form of a drum, or the ſize of a bell, are properly objects of hearing.

If theſe things be conſidered, it will appear, that Mr HUME's argument hath no force to ſupport his concluſion, nay, that it leads to a contrary concluſion. The argument is this, the table we ſee ſeems to diminiſh as we remove farther from it; that is, its apparent magnitude is diminiſhed; but the real table ſuffers no alteration, to wit, in its real magnitude; therefore it is not the real table we ſee: I admit both the premiſes in this ſyllogiſm, but I deny the concluſion. The ſyllogiſm has what the Logicians call two middle terms: Apparent magnitude is the middle term in the firſt premiſe; real magnitude in the ſecond. Therefore, according to the rules of logic, the concluſion is not juſtly drawn from the premiſes; but, laying aſide the rules of logic, let us examine it by the light of common ſenſe.

Let us ſuppoſe, for a moment, that it is the real table we ſee: Muſt not this real table ſeem to diminiſh as we remove farther from it? It is demonſtrable that it muſt. How then can this apparent diminution be an argument that it is not the real table?

CHAP. XIV. When that which muſt happen to the real table, as we remove farther from it, does actually happen to the table we ſee, it is abſurd to conclude from this, that it is not the real table we ſee. It is evident therefore, that this ingenious author has impoſed upon himſelf by confounding real magnitude with apparent magnitude, and that his argument is a mere ſophiſm.

I obſerved that Mr HUME's argument not only has no ſtrength to ſupport his concluſion, but that it leads to the contrary concluſion; to wit, that it is the real table we ſee; for this plain reaſon, that the table we ſee has preciſely that apparent magnitude which it is demonſtrable the real table muſt have when placed at that diſtance.

This argument is made much ſtronger by conſidering, that the real table may be placed ſucceſſively at a thouſand different diſtances; and in every diſtance, in a thouſand different poſitions; and it can be determined demonſtratively, by the rules of geometry and perſpective, what muſt be its apparent magnitude, and apparent figure, in each of thoſe diſtances and poſitions. Let the table be placed ſucceſſively in as many of thoſe different diſtances, and different poſitions, as you will, or in them all; open your eyes and you ſhall ſee a table preciſely of that apparent magnitude, and that apparent figure, which the real table muſt have in that diſtance, and in that poſition. Is not this a ſtrong argument that it is the real table you ſee?

In a word, the appearance of a viſible object is infinitely diverſified, according to its diſtance and poſition. The viſible appearances are innumerable, when we confine ourſelves to one object, and they are multiplied according to the variety of objects. Thoſe appearances have been matter of ſpeculation to ingenious men, at leaſt ſince the time of EUCLID. They have accounted for all this variety, on the ſuppoſition, that the objects we ſee are external, and not in the mind itſelf. The rules they have demonſtrated about the

the various projections of the ſphere, about the appearances of the planets in their progreſſions, ſtations, and retrogradations, and all the rules of perſpective, are built on the ſuppoſition that the objects of ſight are external. They can each of them be tried in thouſands of inſtances. In many arts and profeſſions innumerable trials are daily made; nor were they ever found to fail in a ſingle inſtance. Shall we ſay that a falſe ſuppoſition, invented by the rude vulgar, has been ſo lucky in ſolving an infinite number of phænomena of nature? This ſurely would be a greater prodigy than philoſophy ever exhibited: Add to this, that upon the contrary hypotheſis, to wit, that the objects of ſight are internal, no account can be given of any one of thoſe appearances, nor any phyſical cauſe aſſigned why a viſible object ſhould, in any one caſe, have one apparent figure and magnitude rather than another.

Thus I have conſidered every argument I have found advanced to prove the exiſtence of ideas, or images of external things, in the mind: And if no better arguments can be found, I cannot help thinking, that the whole hiſtory of philoſophy has never furniſhed an inſtance of an opinion ſo unanimouſly entertained by Philoſophers upon ſo ſlight grounds.

A *third* reflection I would make upon this ſubject is, That Philoſophers, notwithſtanding their unanimity as to the exiſtence of ideas, hardly agree in any one thing elſe concerning them. If ideas be not a mere fiction, they muſt be, of all objects of human knowledge, the things we have beſt acceſs to know, and to be acquainted with; yet there is nothing about which men differ ſo much.

Some have held them to be ſelf-exiſtent, others to be in the Divine Mind, others in our own minds, and others in the brain or *ſenſorium*; I conſidered the hypotheſis of images in the brain, in the fourth chapter of this Eſſay. As to images in the mind, if any thing more is meant by the image of an object in the mind than the thought of that object, I know not what it means. The diſtinct

conception

CHAP. XIV. conception of an object may, in a metaphorical or analogical ſenſe, be called an *image* of it in the mind. But this image is only the conception of the object, and not the object conceived. It is an act of the mind, and not the object of that act.

Some Philoſophers will have our ideas, or a part of them, to be innate; others will have them all to be adventitious: Some derive them from the ſenſes alone; others from ſenſation and reflection: Some think they are fabricated by the mind itſelf; others that they are produced by external objects; others that they are the immediate operation of the Deity; others ſay, that impreſſions are the cauſes of ideas, and that the cauſes of impreſſions are unknown: Some think that we have ideas only of material objects, but none of minds, of their operations, or of the relations of things; others will have the immediate object of every thought to be an idea: Some think we have abſtract ideas, and that by this chiefly we are diſtinguiſhed from the brutes; others maintain an abſtract idea to be an abſurdity, and that there can be no ſuch thing: With ſome they are the immediate objects of thought, with others the only objects.

A *fourth* reflection is, That ideas do not make any of the operations of the mind to be better underſtood, although it was probably with that view that they have been firſt invented, and afterwards ſo generally received.

We are at a loſs to know how we perceive diſtant objects; how we remember things paſt; how we imagine things that have no exiſtence. Ideas in the mind ſeem to account for all theſe operations: They are all by the means of ideas reduced to one operation; to a kind of feeling, or immediate perception of things preſent, and in contact with the percipient; and feeling is an operation ſo familiar, that we think it needs no explication, but may ſerve to explain other operations.

But

But this feeling, or immediate perception, is as difficult to be comprehended, as the things which we pretend to explain by it. Two things may be in contact without any feeling or perception; there muſt therefore be in the percipient a power to feel or to perceive. How this power is produced, and how it operates, is quite beyond the reach of our knowledge. As little can we know whether this power muſt be limited to things preſent, and in contact with us. Nor can any man pretend to prove, that the Being, who gave us the power to perceive things preſent, may not give us the power to perceive things that are diſtant, to remember things paſt, and to conceive things that never exiſted.

Some Philoſophers have endeavoured to make all our ſenſes to be only different modifications of touch; a theory which ſerves only to confound things that are different, and to perplex and darken things that are clear. The theory of ideas reſembles this, by reducing all the operations of the human underſtanding to the perception of ideas in our own minds. This power of perceiving ideas is as inexplicable as any of the powers explained by it: And the contiguity of the object contributes nothing at all to make it better underſtood; becauſe there appears no connection between contiguity and perception, but what is grounded on prejudices, drawn from ſome imagined ſimilitude between mind and body; and from the ſuppoſition, that, in perception, the object acts upon the mind, or the mind upon the object. We have ſeen how this theory has led Philoſophers to confound thoſe operations of mind, which experience teaches all men to be different, and teaches them to diſtinguiſh in common language; and that it has led them to invent a language inconſiſtent with the principles upon which all language is grounded.

The *laſt* reflection I ſhall make upon this theory, is, That the natural and neceſſary conſequences of it furniſh a juſt prejudice againſt it to every man who pays a due regard to the common ſenſe of mankind.

Not

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Not to mention, that it led the Pythagoreans and PLATO to imagine that we ſee only the ſhadows of external things, and not the things themſelves, and that it gave riſe to the Peripatetic doctrine of ſenſible *ſpecies*, one of the greateſt abſurdities of that ancient ſyſtem, let us only conſider the fruits it has produced, ſince it was new-modelled by DES CARTES. That great reformer in philoſophy ſaw the abſurdity of the doctrine of ideas coming from external objects, and refuted it effectually, after it had been received by Philoſophers for thouſands of years; but he ſtill retained ideas in the brain and in the mind. Upon this foundation all our modern ſyſtems of the powers of the mind are built. And the tottering ſtate of thoſe fabrics, though built by ſkilful hands, may give a ſtrong ſuſpicion of the unſoundneſs of the foundation.

It was this theory of ideas that led DES CARTES, and thoſe that followed him, to think it neceſſary to prove, by philoſophical arguments, the exiſtence of material objects. And who does not ſee that philoſophy muſt make a very ridiculous figure in the eyes of ſenſible men, while it is employed in muſtering up metaphyſical arguments, to prove that there is a ſun and a moon, an earth and a ſea: Yet we find theſe truly great men, DES CARTES, MALEBRANCHE, ARNAULD, and LOCKE, ſeriouſly employing themſelves in this argument.

Surely their principles led them to think, that all men, from the beginning of the world, believed the exiſtence of theſe things upon inſufficient grounds, and to think that they would be able to place upon a more rational foundation this univerſal belief of mankind. But the misfortune is, that all the laboured arguments they have advanced, to prove the exiſtence of thoſe things we ſee and feel, are mere ſophiſms: Not one of them will bear examination.

I might mention ſeveral paradoxes, which Mr LOCKE, though by no means fond of paradoxes, was led into by this theory of ideas.

ideas. Such as, that the ſecondary qualities of body are no qualities of body at all, but ſenſations of the mind: That the primary qualities of body are reſemblances of our ſenſations: That we have no notion of duration, but from the ſucceſſion of ideas in our minds: That perſonal identity conſiſts in conſciouſneſs; ſo that the ſame individual thinking being may make two or three different perſons, and ſeveral different thinking beings make one perſon: That judgment is nothing but a perception of the agreement or diſagreement of our ideas. Moſt of theſe paradoxes I ſhall have occaſion to examine.

However, all theſe conſequences of the doctrine of ideas were tolerable, compared with thoſe which came afterwards to be diſcovered by BERKELEY and HUME. That there is no material world: No abſtract ideas or notions: That the mind is only a train of related impreſſions and ideas, without any ſubject on which they may be impreſſed: That there is neither ſpace nor time, body nor mind, but impreſſions and ideas only: And, to ſum up all, That there is no probability, even in demonſtration itſelf, nor any one propoſition more probable than its contrary.

Theſe are the noble fruits which have grown upon this theory of ideas, ſince it began to be cultivated by ſkilful hands. It is no wonder that ſenſible men ſhould be diſguſted at philoſophy, when ſuch wild and ſhocking paradoxes paſs under its name. However, as theſe paradoxes have, with great acuteneſs and ingenuity, been deduced by juſt reaſoning from the theory of ideas, they muſt at laſt bring this advantage, that poſitions ſo ſhocking to the common ſenſe of mankind, and ſo contrary to the deciſions of all our intellectual powers, will open mens eyes, and break the force of the prejudice which hath held them entangled in that theory.

CHAP. XV.

Account of the Syſtem of LEIBNITZ.

THERE is yet another ſyſtem concerning perception, of which I ſhall give ſome account, becauſe of the fame of its author. It is the invention of the famous German Philoſopher LEIBNITZ, who, while he lived, held the firſt rank among the Germans in all parts of philoſophy, as well as in mathematics, in juriſprudence, in the knowledge of antiquities, and in every branch, both of ſcience and of literature. He was highly reſpected by emperors, and by many kings and princes, who beſtowed upon him ſingular marks of their eſteem. He was a particular favourite of our Queen CAROLINE, conſort of GEORGE II. with whom he continued his correſpondence by letters after ſhe came to the Crown of Britain, till his death.

The famous controverſy between him and the Britiſh Mathematicians, whether he or Sir ISAAC NEWTON was the inventor of that noble improvement in mathematics, called by NEWTON *the method of fluxions*, and by LEIBNITZ *the differential method*, engaged the attention of the Mathematicians in Europe for ſeveral years. He had likewiſe a controverſy with the learned and judicious Dr SAMUEL CLARKE, about ſeveral points of the Newtonian philoſophy which he diſapproved. The papers which gave occaſion to this controverſy, with all the replies and rejoinders, had the honour to be tranſmitted from the one party to the other through the hands of Queen CAROLINE, and were afterwards publiſhed.

His authority, in all matters of philoſophy, is ſtill ſo great in moſt parts of Germany, that they are conſidered as bold ſpirits, and

and a kind of heretics, who diſſent from him in any thing. CAROLUS WOLFIUS, the moſt voluminous writer in philoſophy of this age, is conſidered as the great interpreter and advocate of the Leibnitzian ſyſtem, and reveres as an oracle whatever has dropped from the pen of LEIBNITZ. This author propoſed two great works upon the mind. The firſt, which I have ſeen, he publiſhed with the title of *Pſychologia empirica, ſeu experimentalis.* The other was to have the title of *Pſychologia rationalis*, and to it he refers for his explication of the theory of LEIBNITZ with regard to the mind. But whether it was publiſhed I have not learned.

I muſt therefore take the ſhort account I am to give of this ſyſtem from the writings of LEIBNITZ himſelf, without the light which his interpreter WOLFIUS may have thrown upon it.

LEIBNITZ conceived the whole univerſe, bodies as well as minds, to be made up of monads, that is, ſimple ſubſtances, each of which is, by the Creator in the beginning of its exiſtence, endowed with certain active and perceptive powers. A monad, therefore, is an active ſubſtance, ſimple, without parts or figure, which has within itſelf the power to produce all the changes it undergoes from the beginning of its exiſtence to eternity. The changes which the monad undergoes, of what kind ſoever, though they may ſeem to us the effect of cauſes operating from without, yet they are only the gradual and ſucceſſive evolutions of its own internal powers, which would have produced all the ſame changes and motions, although there had been no other being in the univerſe.

Every human ſoul is a monad joined to an organiſed body, which organiſed body conſiſts of an infinite number of monads, each having ſome degree of active and of perceptive power in itſelf. But the whole machine of the body has a relation to that monad which we call the ſoul, which is, as it were, the centre of the whole.

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As the univerſe is completely filled with monads, without any chaſm or void, and thereby every body acts upon every other body, according to its vicinity or diſtance, and is mutually reacted upon by every other body, it follows, ſays LEIBNITZ, that every monad is a kind of living mirror, which reflects the whole univerſe, according to its point of view, and repreſents the whole more or leſs diſtinctly.

I cannot undertake to reconcile this part of the ſyſtem with what was before mentioned, to wit, that every change in a monad is the evolution of its own original powers, and would have happened though no other ſubſtance had been created. But to proceed.

There are different orders of monads, ſome higher, and others lower. The higher orders he calls dominant; ſuch is the human ſoul. The monads that compoſe the organiſed bodies of men, animals and plants, are of a lower order, and ſubſervient to the dominant monads. But every monad, of whatever order, is a complete ſubſtance in itſelf, indiviſible, having no parts, indeſtructible, becauſe, having no parts, it cannot periſh by any kind of decompoſition; it can only periſh by annihilation, and we have no reaſon to believe that God will ever annihilate any of the beings which he has made.

The monads of a lower order may, by a regular evolution of their powers, riſe to a higher order. They may ſucceſſively be joined to organiſed bodies, of various forms and different degrees of perception; but they never die, nor ceaſe to be in ſome degree active and percipient.

This Philoſopher makes a diſtinction between perception and what he calls *apperception*. The firſt is common to all monads, the laſt proper to the higher orders, among which are human ſouls.

By

By apperception he underſtands that degree of perception which reflects, as it were, upon itſelf; by which we are conſcious of our own exiſtence, and conſcious of our perceptions; by which we can reflect upon the operations of our own minds, and can comprehend abſtract truths. The mind, in many operations, he thinks, particularly in ſleep, and in many actions common to us with the brutes, has not this apperception, although it is ſtill filled with a multitude of obſcure and indiſtinct perceptions, of which we are not conſcious.

He conceives that our bodies and minds are united in ſuch a manner, that neither has any phyſical influence upon the other. Each performs all its operations by its own internal ſprings and powers; yet the operations of one correſpond exactly with thoſe of the other, by a pre-eſtabliſhed harmony; juſt as one clock may be ſo adjuſted as to keep time with another, although each has its own moving power, and neither receives any part of its motion from the other.

So that according to this ſyſtem all our perceptions of external objects would be the ſame, though external things had never exiſted; our perception of them would continue, although, by the power of God, they ſhould this moment be annihilated: We do not perceive external things becauſe they exiſt, but becauſe the ſoul was originally ſo conſtituted as to produce in itſelf all its ſucceſſive changes, and all its ſucceſſive perceptions, independently of the external objects.

Every perception or apperception, every operation, in a word, of the ſoul, is a neceſſary conſequence of the ſtate of it immediately preceding that operation; and this ſtate is the neceſſary conſequence of the ſtate preceding it; and ſo backwards, until you come to its firſt formation and conſtitution, which produces ſucceſſively, and by neceſſary conſequence, all its ſucceſſive ſtates to the end of its exiſtence: So that in this reſpect the ſoul, and every monad, may be

CHAP. XV. be compared to a watch wound up, which having the ſpring of its motion in itſelf, by the gradual evolution of its own ſpring, produces all the ſucceſſive motions we obſerve in it.

In this account of LEIBNITZ ſyſtem concerning monads, and the pre-eſtabliſhed harmony, I have kept as nearly as I could to his own expreſſions, in his *new ſyſtem of the nature and communication of ſubſtances, and of the union of ſoul and body;* and in the ſeveral illuſtrations of that new ſyſtem which he afterwards publiſhed; and in his *principles of nature and grace founded in reaſon.* I ſhall now make a few remarks upon this ſyſtem.

1. To paſs over the irreſiſtible neceſſity of all human actions, which makes a part of this ſyſtem, that will be conſidered in another place, I obſerve firſt, that the diſtinction made between perception and apperception is obſcure and unphiloſophical: As far as we can diſcover, every operation of our mind is attended with conſciouſneſs, and particularly that which we call the perception of external objects; and to ſpeak of a perception of which we are not conſcious, is to ſpeak without any meaning.

As conſciouſneſs is the only power by which we diſcern the operations of our own minds, or can form any notion of them, an operation of mind of which we are not conſcious, is, we know not what; and to call ſuch an operation by the name of perception, is an abuſe of language. No man can perceive an object, without being conſcious that he perceives it. No man can think, without being conſcious that he thinks. What men are not conſcious of, cannot therefore, without impropriety, be called either perception or thought of any kind. And if we will ſuppoſe operations of mind, of which we are not conſcious, and give a name to ſuch creatures of our imagination, that name muſt ſignify what we know nothing about.

2. To ſuppoſe bodies organiſed or unorganiſed, to be made up of

of indiviſible monads which have no parts, is contrary to all that we know of body. It is eſſential to a body to have parts; and every part of a body, is a body, and has parts alſo. No number of parts, without extenſion or figure, not even an infinite number, if we may uſe that expreſſion, can, by being put together, make a whole that has extenſion and figure, which all bodies have.

3. It is contrary to all that we know of bodies, to aſcribe to the monads, of which they are ſuppoſed to be compounded, perception and active force. If a Philoſopher thinks proper to ſay, that a clod of earth both perceives and has active force, let him bring his proofs. But he ought not to expect, that men who have underſtanding, will ſo far give it up as to receive without proof whatever his imagination may ſuggeſt.

4. This ſyſtem overturns all authority of our ſenſes, and leaves not the leaſt ground to believe the exiſtence of the objects of ſenſe, or the exiſtence of any thing which depends upon the authority of our ſenſes; for our perception of objects, according to this ſyſtem, has no dependence upon any thing external, and would be the ſame as it is, ſuppoſing external objects had never exiſted, or that they were from this moment annihilated.

It is remarkable that LEIBNITZ's ſyſtem, that of MALEBRANCHE, and the common ſyſtem of ideas, or images of external objects in the mind, do all agree in overturning all the authority of our ſenſes; and this one thing, as long as men retain their ſenſes, will always make all theſe ſyſtems truly ridiculous.

5. The laſt obſervation I ſhall make upon this ſyſtem, which indeed is equally applicable to all the ſyſtems of perception I have mentioned, is, that it is all hypotheſis, made up of conjectures and ſuppoſitions, without proof. The Peripatetics ſuppoſed ſenſible *ſpecies* to be ſent forth by the objects of ſenſe. The moderns ſuppoſe ideas in the brain, or in the mind. MALEBRANCHE ſuppoſed,

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poſed, that we perceive the ideas of the Divine Mind. LEIBNITZ ſuppoſed monads and a pre-eſtabliſhed harmony; and theſe monads being creatures of his own making, he is at liberty to give them what properties and powers his fancy may ſuggeſt. In like manner, the Indian Philoſopher ſuppoſed that the earth is ſupported by a huge elephant, and that the elephant ſtands on the back of a huge tortoiſe.

Such ſuppoſitions, while there is no proof of them offered, are nothing but the fictions of human fancy; and we ought no more to believe them, than we believe HOMER's fictions of APOLLO's ſilver bow, or MINERVA's ſhield, or VENUS's girdle. Such fictions in poetry are agreeable to the rules of the art: They are intended to pleaſe, not to convince. But the Philoſophers would have us to believe their fictions, though the account they give of the phænomena of nature has commonly no more probability than the account that HOMER gives of the plague in the Grecian camp, from APOLLO taking his ſtation on a neighbouring mountain, and from his ſilver bow, letting fly his ſwift arrows into the camp.

Men then only begin to have a true taſte in philoſophy, when they have learned to hold hypotheſes in juſt contempt; and to conſider them as the reveries of ſpeculative men, which will never have any ſimilitude to the works of God.

The Supreme Being has given us ſome intelligence of his works, by what our ſenſes inform us of external things, and by what our conſciouſneſs and reflection inform us concerning the operations of our own minds. Whatever can be inferred from theſe common informations, by juſt and ſound reaſoning, is true and legitimate philoſophy: But what we add to this from conjecture is all ſpurious and illegitimate.

After this long account of the theories advanced by Philoſophers, to account for our perception of external objects, I hope it will appear,

pear, that neither ARISTOTLE's theory of ſenſible ſpecies, nor MALEBRANCHE's, of our ſeeing things in God, nor the common theory of our perceiving ideas in our own minds, nor LEIBNITZ's theory of monads, and a pre-eſtabliſhed harmony, give any ſatisfying account of this power of the mind, or make it more intelligible than it is without their aid. They are conjectures, and if they were true, would ſolve no difficulty, but raiſe many new ones. It is therefore more agreeable to good ſenſe, and to ſound philoſophy, to reſt ſatisfied with what our conſciouſneſs and attentive reflection diſcover to us of the nature of perception, than by inventing hypotheſes, to attempt to explain things which are above the reach of human underſtanding. I believe no man is able to explain how we perceive external objects, any more than how we are conſcious of thoſe that are internal. Perception, conſciouſneſs, memory, and imagination, are all original and ſimple powers of the mind, and parts of its conſtitution. For this reaſon, though I have endeavoured to ſhow, that the theories of Philoſophers on this ſubject are ill grounded and inſufficient, I do not attempt to ſubſtitute any other theory in their place.

Every man feels that perception gives him an invincible belief of the exiſtence of that which he perceives; and that this belief is not the effect of reaſoning, but the immediate conſequence of perception. When Philoſophers have wearied themſelves and their readers with their ſpeculations upon this ſubject, they can neither ſtrengthen this belief, nor weaken it; nor can they ſhow how it is produced. It puts the Philoſopher and the peaſant upon a level; and neither of them can give any other reaſon for believing his ſenſes, than that he finds it impoſſible for him to do otherwiſe.

CHAP. XVI.

Of Senſation.

HAVING finiſhed what I intend, with regard to that act of mind which we call the perception of an external object, I proceed to conſider another, which, by our conſtitution, is conjoined with perception, and not with perception only, but with many other acts of our minds; and that is ſenſation. To prevent repetition, I muſt refer the reader to the explication of this word given in Eſſay I. chap. 1.

Almoſt all our perceptions have correſponding ſenſations which conſtantly accompany them, and, on that account, are very apt to be confounded with them. Neither ought we to expect, that the ſenſation, and its correſponding perception, ſhould be diſtinguiſhed in common language, becauſe the purpoſes of common life do not require it. Language is made to ſerve the purpoſes of ordinary converſation; and we have no reaſon to expect that it ſhould make diſtinctions that are not of common uſe. Hence it happens, that a quality perceived, and the ſenſation correſponding to that perception, often go under the ſame name.

This makes the names of moſt of our ſenſations ambiguous, and this ambiguity hath very much perplexed Philoſophers. It will be neceſſary to give ſome inſtances, to illuſtrate the diſtinction between our ſenſations and the objects of perception.

When I ſmell a roſe, there is in this operation both ſenſation and perception. The agreeable odour I feel, conſidered by itſelf, without relation to any external object, is merely a ſenſation. It affects the mind in a certain way; and this affection of the mind may

may be conceived, without a thought of the roſe, or any other object. This ſenſation can be nothing elſe than it is felt to be. Its very eſſence conſiſts in being felt; and when it is not felt, it is not. There is no difference between the ſenſation and the feeling of it; they are one and the ſame thing. It is for this reaſon, that we before obſerved, that, in ſenſation, there is no object diſtinct from that act of the mind by which it is felt; and this holds true with regard to all ſenſations.

Let us next attend to the perception which we have in ſmelling a roſe. Perception has always an external object; and the object of my perception, in this caſe, is that quality in the roſe which I diſcern by the ſenſe of ſmell. Obſerving that the agreeable ſenſation is raiſed when the roſe is near, and ceaſes when it is removed, I am led, by my nature, to conclude ſome quality to be in the roſe, which is the cauſe of this ſenſation. This quality in the roſe is the object perceived; and that act of my mind, by which I have the conviction and belief of this quality, is what in this caſe I call perception.

But it is here to be obſerved, that the ſenſation I feel, and the quality in the roſe which I perceive, are both called by the ſame name. The ſmell of a roſe is the name given to both: So that this name hath two meanings; and the diſtinguiſhing its different meanings removes all perplexity, and enables us to give clear and diſtinct anſwers to queſtions, about which Philoſophers have held much diſpute.

Thus, if it is aſked, Whether the ſmell be in the roſe, or in the mind that feels it? The anſwer is obvious: That there are two different things ſignified by the ſmell of a roſe; one of which is in the mind, and can be in nothing but in a ſentient being; the other is truly and properly in the roſe. The ſenſation which I feel is in my mind. The mind is the ſentient being; and as the roſe is inſentient, there can be no ſenſation, nor any thing reſembling

CHAP. XVI. ſenſation in it. But this ſenſation in my mind is occaſioned by a certain quality in the roſe, which is called by the ſame name with the ſenſation, not on account of any ſimilitude, but becauſe of their conſtant concomitancy.

All the names we have for ſmells, taſtes, ſounds, and for the various degrees of heat and cold, have a like ambiguity; and what has been ſaid of the ſmell of a roſe may be applied to them. They ſignify both a ſenſation, and a quality perceived by means of that ſenſation. The firſt is the ſign, the laſt the thing ſignified. As both are conjoined by nature, and as the purpoſes of common life do not require them to be disjoined in our thoughts, they are both expreſſed by the ſame name: And this ambiguity is to be found in all languages, becauſe the reaſon of it extends to all.

The ſame ambiguity is found in the names of ſuch diſeaſes as are indicated by a particular painful ſenſation: Such as the toothach, the headach. The toothach ſignifies a painful ſenſation, which can only be in a ſentient being; but it ſignifies alſo a diſorder in the body, which has no ſimilitude to a ſenſation, but is naturally connected with it.

Preſſing my hand with force againſt the table, I feel pain, and I feel the table to be hard. The pain is a ſenſation of the mind, and there is nothing that reſembles it in the table. The hardneſs is in the table, nor is there any thing reſembling it in the mind. Feeling is applied to both; but in a different ſenſe; being a word common to the act of ſenſation, and to that of perceiving by the ſenſe of touch.

I touch the table gently with my hand, and I feel it to be ſmooth, hard, and cold. Theſe are qualities of the table perceived by touch; but I perceive them by means of a ſenſation which indicates them. This ſenſation not being painful, I commonly give no attention to it. It carries my thought immediately to

to the thing ſignified by it, and is itſelf forgot, as if it had never been. But by repeating it, and turning my attention to it, and abſtracting my thought from the thing ſignified by it, I find it to be merely a ſenſation, and that it has no ſimilitude to the hardneſs, ſmoothneſs, or coldneſs of the table which are ſignified by it.

It is indeed difficult, at firſt, to disjoin things in our attention which have always been conjoined, and to make that an object of reflection which never was ſo before; but ſome pains and practice will overcome this difficulty in thoſe who have got the habit of reflecting on the operations of their own minds.

Although the preſent ſubject leads us only to conſider the ſenſations which we have by means of our external ſenſes, yet it will ſerve to illuſtrate what has been ſaid, and I apprehend is of importance in itſelf to obſerve, that many operations of mind, to which we give one name, and which we always conſider as one thing, are complex in their nature, and made up of ſeveral more ſimple ingredients; and of theſe ingredients ſenſation very often makes one. Of this we ſhall give ſome inſtances.

The appetite of hunger includes an uneaſy ſenſation, and a deſire of food. Senſation and deſire are different acts of mind. The laſt, from its nature, muſt have an object; the firſt has no object. Theſe two ingredients may always be ſeparated in thought; perhaps they ſometimes are, in reality; but hunger includes both.

Benevolence towards our fellow-creatures includes an agreeable feeling; but it includes alſo a deſire of the happineſs of others. The ancients commonly called it deſire: Many moderns chuſe rather to call it a feeling. Both are right; and they only err who exclude either of the ingredients. Whether theſe two ingredients are neceſſarily connected, is perhaps difficult for us to determine,

CHAP. XVI. termine, there being many neceſſary connections which we do not perceive to be neceſſary; but we can disjoin them in thought. They are different acts of the mind.

An uneaſy feeling, and a deſire, are in like manner the ingredients of malevolent affections; ſuch as malice, envy, revenge. The paſſion of fear includes an uneaſy ſenſation or feeling, and an opinion of danger; and hope is made up of the contrary ingredients. When we hear of a heroic action, the ſentiment which it raiſes in our mind is made up of various ingredients. There is in it an agreeable feeling, a benevolent affection to the perſon, and a judgment or opinion of his merit.

If we thus analyſe the various operations of our minds, we ſhall find, that many of them which we conſider as perfectly ſimple, becauſe we have been accuſtomed to call them by one name, are compounded of more ſimple ingredients; and that ſenſation, or feeling which is only a more refined kind of ſenſation, makes one ingredient, not only in the perception of external objects, but in moſt operations of the mind.

A ſmall degree of reflection may ſatisfy us that the number and variety of our ſenſations and feelings is prodigious: For, to omit all thoſe which accompany our appetites, paſſions, and affections, our moral ſentiments, and ſentiments of taſte, even our external ſenſes furniſh a great variety of ſenſations differing in kind, and almoſt in every kind an endleſs variety of degrees. Every variety we diſcern, with regard to taſte, ſmell, ſound, colour, heat and cold, and in the tangible qualities of bodies, is indicated by a ſenſation correſponding to it.

The moſt general and the moſt important diviſion of our ſenſations and feelings, is into the agreeable, the diſagreeable, and the indifferent. Every thing we call pleaſure, happineſs, or enjoyment, on the one hand; and on the other, every thing we call miſery, pain,

pain, or uneaſineſs, is ſenſation or feeling: For no man can for the preſent be more happy, or more miſerable than he feels himſelf to be. He cannot be deceived with regard to the enjoyment or ſuffering of the preſent moment.

But I apprehend, that beſides the ſenſations that are either agreeable or diſagreeable, there is ſtill a greater number that are indifferent. To theſe we give ſo little attention that they have no name, and are immediately forgot as if they had never been; and it requires attention to the operations of our minds to be convinced of their exiſtence.

For this end we may obſerve, that to a good ear every human voice is diſtinguiſhable from all others. Some voices are pleaſant, ſome diſagreeable; but the far greater part can neither be ſaid to be one or the other. The ſame thing may be ſaid of other ſounds, and no leſs of taſtes, ſmells, and colours; and if we conſider that our ſenſes are in continual exerciſe while we are awake, that ſome ſenſation attends every object they preſent to us, and that familiar objects ſeldom raiſe any emotion pleaſant or painful; we ſhall ſee reaſon, beſides the agreeable and diſagreeable, to admit a third claſs of ſenſations that may be called indifferent.

The ſenſations that are indifferent, are far from being uſeleſs. They ſerve as ſigns to diſtinguiſh things that differ; and the information we have concerning things external, comes by their means. Thus, if a man had no ear to receive pleaſure from the harmony or melody of ſounds, he would ſtill find the ſenſe of hearing of great utility: Though ſounds give him neither pleaſure nor pain of themſelves, they would give him much uſeful information; and the like may be ſaid of the ſenſations we have by all the other ſenſes.

As to the ſenſations and feelings that are agreeable or diſagreeable, they differ much not only in degree, but in kind and in dignity.

CHAP. XVI. nity. Some belong to the animal part of our nature, and are common to us with the brutes: Others belong to the rational and moral part. The firſt are more properly called *ſenſations*, the laſt *feelings*. The French word *ſentiment* is common to both.

The intention of Nature in them is for the moſt part obvious, and well deſerving our notice. It has been beautifully illuſtrated by a very elegant French writer, in his *Theorie des ſentiments agreables*.

The author of Nature, in the diſtribution of agreeable and painful feelings, hath wiſely and benevolently conſulted the good of the human ſpecies, and hath even ſhown us, by the ſame means, what tenor of conduct we ought to hold. For, *firſt*, The painful ſenſations of the animal kind are admonitions to avoid what would hurt us; and the agreeable ſenſations of this kind, invite as to thoſe actions that are neceſſary to the preſervation of the individual, or of the kind. *Secondly*, By the ſame means nature invites us to moderate bodily exerciſe, and admoniſhes us to avoid idleneſs and inactivity on the one hand, and exceſſive labour and fatigue on the other. *Thirdly*, The moderate exerciſe of all our rational powers gives pleaſure. *Fourthly*, Every ſpecies of beauty is beheld with pleaſure, and every ſpecies of deformity with diſguſt; and we ſhall find all that we call beautiful, to be ſomething eſtimable or uſeful in itſelf, or a ſign of ſomething that is eſtimable or uſeful. *Fifthly*, The benevolent affections are all accompanied with an agreeable feeling, the malevolent with the contrary. And, *ſixthly*, The higheſt, the nobleſt, and moſt durable pleaſure, is that of doing well, and acting the part that becomes us; and the moſt bitter and painful ſentiment, the anguiſh and remorſe of a guilty conſcience. Theſe obſervations, with regard to the œconomy of Nature in the diſtribution of our painful and agreeable ſenſations and feelings, are illuſtrated by the author laſt mentioned, ſo elegantly and judiciouſly, that I ſhall not attempt to ſay any thing upon them after him.

I ſhall

I ſhall conclude this chapter by obſerving, that as the confounding our ſenſations with that perception of external objects, which is conſtantly conjoined with them, has been the occaſion of moſt of the errors and falſe theories of Philoſophers with regard to the ſenſes; ſo the diſtinguiſhing theſe operations ſeems to me to be the key that leads to a right underſtanding of both.

Senſation, taken by itſelf, implies neither the conception nor belief of any external object. It ſuppoſes a ſentient being, and a certain manner in which that being is affected, but it ſuppoſes no more. Perception implies an immediate conviction and belief of ſomething external; ſomething different both from the mind that perceives, and from the act of perception. Things ſo different in their nature ought to be diſtinguiſhed; but by our conſtitution they are always united. Every different perception is conjoined with a ſenſation that is proper to it. The one is the ſign, the other the thing ſignified. They coaleſce in our imagination. They are ſignified by one name, and are conſidered as one ſimple operation. The purpoſes of life do not require them to be diſtinguiſhed.

It is the Philoſopher alone who has occaſion to diſtinguiſh them, when he would analyſe the operation compounded of them. But he has no ſuſpicion that there is any compoſition in it; and to diſcover this requires a degree of reflection which has been too little practiſed even by Philoſophers.

In the old philoſophy, ſenſation and perception were perfectly confounded. The ſenſible ſpecies coming from the object, and impreſſed upon the mind, was the whole; and you might call it ſenſation or perception as you pleaſed.

DES CARTES and LOCKE, attending more to the operations of their own minds, ſay, That the ſenſations by which we have notice of ſecondary qualities, have no reſemblance to any thing that pertains to body; but they did not ſee that this might with equal

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juſtice be applied to the primary qualities. Mr LOCKE maintains, that the ſenſations we have from primary qualities are reſemblances of thoſe qualities. This ſhows how groſsly the moſt ingenious men may err with regard to the operations of their minds. It muſt indeed be acknowledged, that it is much eaſier to have a diſtinct notion of the ſenſations that belong to ſecondary, than of thoſe that belong to the primary qualities. The reaſon of this will appear in the next chapter.

But had Mr LOCKE attended with ſufficient accuracy to the ſenſations which he was every day and every hour receiving from primary qualities, he would have ſeen that they can as little reſemble any quality of an inanimated being, as pain can reſemble a cube or a circle.

What had eſcaped this ingenious Philoſopher, was clearly diſcerned by Biſhop BERKELEY. He had a juſt notion of ſenſations, and ſaw that it was impoſſible that any thing in an inſentient being could reſemble them; a thing ſo evident in itſelf, that it ſeems wonderful that it ſhould have been ſo long unknown.

But let us attend to the conſequence of this diſcovery. Philoſophers, as well as the vulgar, had been accuſtomed to comprehend both ſenſation and perception under one name, and to conſider them as one uncompounded operation. Philoſophers, even more than the vulgar, gave the name of ſenſation to the whole operation of the ſenſes; and all the notions we have of material things were called ideas of ſenſation. This led Biſhop BERKELEY to take one ingredient of a complex operation for the whole; and having clearly diſcovered the nature of ſenſation, taking it for granted that all that the ſenſes preſent to the mind is ſenſation, which can have no reſemblance to any thing material, he concluded that there is no material world.

If the ſenſes furniſhed us with no materials of thought but ſenſations,

ſations, his concluſion muſt be juſt; for no ſenſation can give us the conception of material things, far leſs any argument to prove their exiſtence. But if it is true that by our ſenſes we have not only a variety of ſenſations, but likewiſe a conception, and an immediate natural conviction of external objects, he reaſons from a falſe ſuppoſition, and his arguments fall to the ground.

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Of the Objects of Perception; and firſt, Of primary and ſecondary Qualities.

THE objects of perception are the various qualities of bodies. Intending to treat of theſe only in general, and chiefly with a view to explain the notions which our ſenſes give us of them, I begin with the diſtinction between primary and ſecondary qualities. Theſe were diſtinguiſhed very early. The Peripatetic ſyſtem confounded them, and left no difference. The diſtinction was again revived by DES CARTES and LOCKE, and a ſecond time aboliſhed by BERKELEY and HUME. If the real foundation of this diſtinction can be pointed out, it will enable us to account for the various revolutions in the ſentiments of Philoſophers concerning it.

Every one knows that extenſion, diviſibility, figure, motion, ſolidity, hardneſs, ſoftneſs, and fluidity, were by Mr LOCKE called *primary qualities of body*; and that ſound, colour, taſte, ſmell, and heat or cold, were called *ſecondary qualities*. Is there a juſt foundation for this diſtinction? Is there any thing common to the primary which belongs not to the ſecondary? And what is it?

I anſwer, That there appears to me to be a real foundation for the diſtinction; and it is this: That our ſenſes give us a direct and a diſtinct notion of the primary qualities, and inform us what they are in themſelves: But of the ſecondary qualities, our ſenſes

CHAP. XVII. give us only a relative and obſcure notion. They inform us only, that they are qualities that affect us in a certain manner, that is, produce in us a certain ſenſation; but as to what they are in themſelves, our ſenſes leave us in the dark.

Every man capable of reflection may eaſily ſatisfy himſelf, that he has a perfectly clear and diſtinct notion of extenſion, diviſibility, figure, and motion. The ſolidity of a body means no more, but that it excludes other bodies from occupying the ſame place at the ſame time. Hardneſs, ſoftneſs, and fluidity, are different degrees of coheſion in the parts of a body. It is fluid, when it has no ſenſible coheſion; ſoft when the coheſion is weak; and hard when it is ſtrong: Of the cauſe of this coheſion we are ignorant, but the thing itſelf we underſtand perfectly, being immediately informed of it by the ſenſe of touch. It is evident, therefore, that of the primary qualities we have a clear and diſtinct notion; we know what they are, though we may be ignorant of their cauſes.

I obſerved farther, that the notion we have of primary qualities is direct, and not relative only. A relative notion of a thing, is, ſtrictly ſpeaking, no notion of the thing at all, but only of ſome relation which it bears to ſomething elſe.

Thus gravity ſometimes ſignifies the tendency of bodies towards the earth; ſometimes it ſignifies the cauſe of that tendency: When it means the firſt, I have a direct and diſtinct notion of gravity; I ſee it, and feel it, and know perfectly what it is; but this tendency muſt have a cauſe: We give the ſame name to the cauſe; and that cauſe has been an object of thought and of ſpeculation. Now what notion have we of this cauſe when we think and reaſon about it? It is evident, we think of it as an unknown cauſe, of a known effect. This is a relative notion, and it muſt be obſcure, becauſe it gives us no conception of what the thing is, but of what relation it bears to ſomething elſe. Every relation which a thing unknown bears to ſomething that is known, may give a relative notion

notion of it; and there are many objects of thought, and of diſcourſe, of which our faculties can give no better than a relative notion.

Having premiſed theſe things to explain what is meant by a relative notion, it is evident, that our notion of primary qualities is not of this kind; we know what they are, and not barely what relation they bear to ſomething elſe.

It is otherwiſe with ſecondary qualities. If you aſk me, what is that quality or modification in a roſe which I call its ſmell, I am at a loſs to anſwer directly. Upon reflection I find, that I have a diſtinct notion of the ſenſation which it produces in my mind. But there can be nothing like to this ſenſation in the roſe, becauſe it is inſentient. The quality in the roſe is ſomething which occaſions the ſenſation in me; but what that ſomething is, I know not. My ſenſes give me no information upon this point. The only notion therefore my ſenſes give is this, That ſmell in the roſe is an unknown quality or modification, which is the cauſe or occaſion of a ſenſation which I know well. The relation which this unknown quality bears to the ſenſation with which nature hath connected it, is all I learn from the ſenſe of ſmelling; but this is evidently a relative notion. The ſame reaſoning will apply to every ſecondary quality.

Thus I think it appears, that there is a real foundation for the diſtinction of primary from ſecondary qualities; and that they are diſtinguiſhed by this, that of the primary we have by our ſenſes a direct and diſtinct notion; but of the ſecondary only a relative notion, which muſt, becauſe it is only relative, be obſcure; they are conceived only as the unknown cauſes or occaſions of certain ſenſations with which we are well acquainted.

The account I have given of this diſtinction is founded upon no hypotheſis. Whether our notions of primary qualities are direct

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and diſtinct, thoſe of the ſecondary relative and obſcure, is a matter of fact, of which every man may have certain knowledge by attentive reflection upon them. To this reflection I appeal, as the proper teſt of what has been advanced, and proceed to make ſome reflections on this ſubject.

1. The primary qualities are neither ſenſations, nor are they reſemblances of ſenſations. This appears to me ſelf-evident. I have a clear and diſtinct notion of each of the primary qualities. I have a clear and diſtinct notion of ſenſation. I can compare the one with the other; and when I do ſo, I am not able to diſcern a reſembling feature. Senſation is the act, or the feeling, (I diſpute not which) of a ſentient being. Figure, diviſibility, ſolidity, are neither acts nor feelings. Senſation ſuppoſes a ſentient being as its ſubject; for a ſenſation that is not felt by ſome ſentient being, is an abſurdity. Figure and diviſibility ſuppoſes a ſubject that is figured and diviſible, but not a ſubject that is ſentient.

2. We have no reaſon to think that any of the ſecondary qualities reſemble any ſenſation. The abſurdity of this notion has been clearly ſhown by DES CARTES, LOCKE, and many modern Philoſophers. It was a tenet of the ancient philoſophy, and is ſtill by many imputed to the vulgar, but only as a vulgar error. It is too evident to need proof, that the vibrations of a ſounding body do not reſemble the ſenſation of ſound, nor the effluvia of an odorous body the ſenſation of ſmell.

3. The diſtinctneſs of our notions of primary qualities prevents all queſtions and diſputes about their nature. There are no different opinions about the nature of extenſion, figure, or motion, or the nature of any primary quality. Their nature is manifeſt to our ſenſes, and cannot be unknown to any man, or miſtaken by him, though their cauſes may admit of diſpute.

The primary qualities are the object of the mathematical ſciences;

ences; and the diſtinctneſs of our notions of them enables us to reaſon demonſtratively about them to a great extent. Their various modifications are preciſely defined in the imagination, and thereby capable of being compared, and their relations determined with preciſion and certainty.

It is not ſo with ſecondary qualities. Their nature not being manifeſt to the ſenſe, may be a ſubject of diſpute. Our feeling informs us that the fire is hot; but it does not inform us what that heat of the fire is. But does it not appear a contradiction, to ſay we know that the fire is hot, but we know not what that heat is? I anſwer, There is the ſame appearance of contradiction in many things, that muſt be granted. We know that wine has an inebriating quality; but we know not what that quality is. It is true, indeed, that if we had not ſome notion of what is meant by the heat of fire, and by an inebriating quality, we could affirm nothing of either with underſtanding. We have a notion of both; but it is only a relative notion. We know that they are the cauſes of certain known effects.

4. The nature of ſecondary qualities is a proper ſubject of philoſophical diſquiſition; and in this philoſophy has made ſome progreſs. It has been diſcovered, that the ſenſation of ſmell is occaſioned by the effluvia of bodies; that of ſound by their vibration. The diſpoſition of bodies to reflect a particular kind of light occaſions the ſenſation of colour. Very curious diſcoveries have been made of the nature of heat, and an ample field of diſcovery in theſe ſubjects remains.

5. We may ſee why the ſenſations belonging to ſecondary qualities are an object of our attention, while thoſe which belong to the primary are not.

The firſt are not only ſigns of the object perceived, but they bear a capital part in the notion we form of it. We conceive it only as that

CHAP. XVII. that which occaſions ſuch a ſenſation, and therefore cannot reflect upon it without thinking of the ſenſation which it occaſions: We have no other mark whereby to diſtinguiſh it. The thought of a ſecondary quality, therefore, always carries us back to the ſenſation which it produces. We give the ſame name to both, and are apt to confound them together.

But having a clear and diſtinct conception of primary qualities, we have no need when we think of them to recal their ſenſations. When a primary quality is perceived, the ſenſation immediately leads our thought to the quality ſignified by it, and is itſelf forgot. We have no occaſion afterwards to reflect upon it; and ſo we come to be as little acquainted with it, as if we had never felt it. This is the caſe with the ſenſations of all primary qualities, when they are not ſo painful or pleaſant as to draw our attention.

When a man moves his hand rudely againſt a pointed hard body, he feels pain, and may eaſily be perſuaded that this pain is a ſenſation, and that there is nothing reſembling it in the hard body; at the ſame time he perceives the body to be hard and pointed, and he knows that theſe qualities belong to the body only. In this caſe, it is eaſy to diſtinguiſh what he feels from what he perceives.

Let him again touch the pointed body gently, ſo as to give him no pain; and now you can hardly perſuade him that he feels any thing but the figure and hardneſs of the body; ſo difficult it is to attend to the ſenſations belonging to primary qualities, when they are neither pleaſant nor painful. They carry the thought to the external object, and immediately diſappear and are forgot. Nature intended them only as ſigns; and when they have ſerved that purpoſe they vaniſh.

We are now to conſider the opinions both of the vulgar, and of Philoſophers upon this ſubject. As to the former, it is not to be expected

expected that they ſhould make diſtinctions which have no connection with the common affairs of life; they do not therefore diſtinguiſh the primary from the ſecondary qualities, but ſpeak of both as being equally qualities of the external object. Of the primary qualities they have a diſtinct notion, as they are immediately and diſtinctly perceived by the ſenſes; of the ſecondary, their notions, as I apprehend, are confuſed and indiſtinct, rather than erroneous. A ſecondary quality is the unknown cauſe or occaſion of a well known effect; and the ſame name is common to the cauſe and the effect. Now, to diſtinguiſh clearly the different ingredients of a complex notion, and, at the ſame time, the different meanings of an ambiguous word, is the work of a Philoſopher; and is not to be expected of the vulgar, when their occaſions do not require it.

I grant, therefore, that the notion which the vulgar have of ſecondary qualities, is indiſtinct and inaccurate. But there ſeems to be a contradiction between the vulgar and the Philoſopher upon this ſubject, and each charges the other with a groſs abſurdity. The vulgar ſay, That fire is hot, and ſnow cold, and ſugar ſweet; and that to deny this is a groſs abſurdity, and contradicts the teſtimony of our ſenſes. The Philoſopher ſays, That heat, and cold, and ſweetneſs, are nothing but ſenſations in our minds; and it is abſurd to conceive, that theſe ſenſations are in the fire, or in the ſnow, or in the ſugar.

I believe this contradiction between the vulgar and the Philoſopher is more apparent than real; and that it is owing to an abuſe of language on the part of the Philoſopher, and to indiſtinct notions on the part of the vulgar. The Philoſopher ſays, There is no heat in the fire, meaning, that the fire has not the ſenſation of heat. His meaning is juſt; and the vulgar will agree with him, as ſoon as they underſtand his meaning: But his language is improper; for there is really a quality in the fire, of which the proper name is heat; and the name of heat is given to this quality,

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both by Philoſophers and by the vulgar, much more frequently than to the ſenſation of heat. This ſpeech of the Philoſopher, therefore, is meant by him in one ſenſe; it is taken by the vulgar in another ſenſe. In the ſenſe in which they take it, it is indeed abſurd, and ſo they hold it to be. In the ſenſe in which he means it, it is true; and the vulgar, as ſoon as they are made to underſtand that ſenſe, will acknowledge it to be true. They know as well as the Philoſopher, that the fire does not feel heat; and this is all that he means by ſaying there is no heat in the fire.

In the opinions of Philoſophers about primary and ſecondary qualities, there have been, as was before obſerved, ſeveral revolutions: They were diſtinguiſhed long before the days of ARISTOTLE, by the ſect called Atomiſts; among whom DEMOCRITUS made a capital figure. In thoſe times, the name of *quality* was applied only to thoſe we call ſecondary qualities; the primary being conſidered as eſſential to matter, were not called qualities. That the atoms, which they held to be the firſt principles of things, were extended, ſolid, figured, and moveable, there was no doubt; but the queſtion was, whether they had ſmell, taſte, and colour? or, as it was commonly expreſſed, whether they had qualities? The Atomiſts maintained, that they had not; that the qualities were not in bodies, but were ſomething reſulting from the operation of bodies upon our ſenſes.

It would ſeem, that when men began to ſpeculate upon this ſubject, the primary qualities appeared ſo clear and manifeſt, that they could entertain no doubt of their exiſtence wherever matter exiſted; but the ſecondary ſo obſcure, that they were at a loſs where to place them. They uſed this compariſon; as fire, which is neither in the flint nor in the ſteel, is produced by their colliſion, ſo thoſe qualities, though not in bodies, are produced by their impulſe upon our ſenſes.

This doctrine was oppoſed by ARISTOTLE. He believed taſte and

and colour to be ſubſtantial forms of bodies, and that their ſpecies, as well as thoſe of figure and motion, are received by the ſenſes.

In believing, that what we commonly call *taſte* and *colour*, is ſomething really inherent in body, and does not depend upon its being taſted and ſeen, he followed nature. But, in believing that our ſenſations of taſte and colour are the forms or ſpecies of thoſe qualities received by the ſenſes, he followed his own theory, which was an abſurd fiction. DES CARTES not only ſhowed the abſurdity of ſenſible ſpecies received by the ſenſes, but gave a more juſt and more intelligible account of ſecondary qualities than had been given before. Mr LOCKE followed him, and beſtowed much pains upon this ſubject. He was the firſt, I think, that gave them the name of ſecondary qualities, which has been very generally adopted. He diſtinguiſhed the ſenſation from the quality in the body, which is the cauſe or occaſion of that ſenſation, and ſhowed that there neither is nor can be any ſimilitude between them.

By this account, the ſenſes are acquitted of putting any fallacy upon us; the ſenſation is real, and no fallacy; the quality in the body, which is the cauſe or occaſion of this ſenſation, is likewiſe real, though the nature of it is not manifeſt to our ſenſes. If we impoſe upon ourſelves, by confounding the ſenſation with the quality that occaſions it, this is owing to raſh judgment, or weak underſtanding, but not to any falſe teſtimony of our ſenſes.

This account of ſecondary qualities I take to be very juſt; and, if Mr LOCKE had ſtopped here, he would have left the matter very clear. But he thought it neceſſary to introduce the theory of ideas, to explain the diſtinction between primary and ſecondary qualities, and by that means, as I think, perplexed and darkened it.

When Philoſophers ſpeak about ideas, we are often at a loſs to know what they mean by them, and may be apt to ſuſpect that they are mere fictions, that have no exiſtence. They have told us,

CHAP. XVII. that, by the ideas which we have immediately from our ſenſes, they mean our ſenſations. Theſe, indeed, are real things, and not fictions. We may, by accurate attention to them, know perfectly their nature; and if Philoſophers would keep by this meaning of the word *idea*, when applied to the objects of ſenſe, they would at leaſt be more intelligible. Let us hear how Mr LOCKE explains the nature of thoſe ideas, when applied to primary and ſecondary qualities, Book 2. chap. 8. ſect. 7. 10th edition. "To diſcover "the nature of our ideas the better, and to diſcourſe of them "intelligibly, it will be convenient to diſtinguiſh them, as they "are ideas, or perceptions in our minds, and as they are modifi- "cations of matter in the bodies that cauſe ſuch perceptions in us, "that ſo we may not think (as perhaps uſually is done), that they "are exactly the images and reſemblances of ſomething inherent "in the ſubject; moſt of thoſe of ſenſation being, in the mind, "no more the likeneſs of ſomething exiſting without us, than the "names that ſtand for them are the likeneſs of our ideas, which "yet, upon hearing, they are apt to excite in us."

This way of diſtinguiſhing a thing, *firſt*, as what it is; and, *ſecondly*, as what it is not, is, I apprehend, a very extraordinary way of diſcovering its nature: And if ideas are ideas or perceptions in our minds, and at the ſame time the modifications of matter in the bodies that cauſe ſuch perceptions in us, it will be no eaſy matter to diſcourſe of them intelligibly.

The diſcovery of the nature of ideas is carried on in the next ſection, in a manner no leſs extraordinary. "Whatſoever the mind "perceives in itſelf, or is the immediate object of perception, "thought, or underſtanding, that I call *idea*; and the power to "produce any idea in our mind, I call *quality* of the ſubject "wherein that power is. Thus a ſnowball having the power "to produce in us the ideas of white, cold, and round, the powers "to produce thoſe ideas in us, as they are in the ſnowball, I call "*qualities*; and as they are ſenſations, or perceptions in our- "underſtandings,

" underſtandings, I call them *ideas;* which ideas, if I ſpeak of " them ſometimes as in the things themſelves, I would be under- " ſtood to mean thoſe qualities in the objects which produce them " in us."

Theſe are the diſtinctions which Mr LOCKE thought convenient, in order to diſcover the nature of our ideas of the qualities of matter the better, and to diſcourſe of them intelligibly. I believe it will be difficult to find two other paragraphs in the Eſſay ſo unintelligible. Whether this is to be imputed to the intractable nature of ideas, or to an oſcitancy of the author, with which he is very rarely chargeable, I leave the reader to judge. There are, indeed, ſeveral other paſſages in the ſame chapter, in which a like obſcurity appears; but I do not chuſe to dwell upon them. The concluſion drawn by him from the whole, is, that primary and ſecondary qualities are diſtinguiſhed by this, that the ideas of the former are reſemblances or copies of them; but the ideas of the other are not reſemblances of them. Upon this doctrine, I beg leave to make two obſervations.

Firſt, Taking it for granted, that, by the ideas of primary and ſecondary qualities, he means the ſenſations they excite in us, I obſerve that it appears ſtrange, that a ſenſation ſhould be the idea of a quality in body, to which it is acknowledged to bear no reſemblance. If the ſenſation of ſound be the idea of that vibration of the ſounding body which occaſions it, a ſurfeit may, for the ſame reaſon, be the idea of a feaſt.

A *ſecond* obſervation is, That, when Mr LOCKE affirms, that the ideas of primary qualities, that is, the ſenſations they raiſe in us, are reſemblances of thoſe qualities, he ſeems neither to have given due attention to thoſe ſenſations, nor to the nature of ſenſation in general.

Let a man preſs his hand againſt a hard body, and let him attend

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tend to the ſenſation he feels, excluding from his thought every thing external, even the body that is the cauſe of his feeling. This abſtraction indeed is difficult, and ſeems to have been little, if at all, practiſed: But it is not impoſſible, and it is evidently the only way to underſtand the nature of the ſenſation. A due attention to this ſenſation will ſatisfy him, that it is no more like hardneſs in a body, than the ſenſation of ſound is like vibration in the ſounding body.

I know of no ideas but my conceptions; and my idea of hardneſs in a body, is the conception of ſuch a coheſion of its parts as requires great force to diſplace them. I have both the conception and belief of this quality in the body, at the ſame time that I have the ſenſation of pain, by preſſing my hand againſt it. The ſenſation and perception are cloſely conjoined by my conſtitution; but I am ſure they have no ſimilitude: I know no reaſon why the one ſhould be called the idea of the other, which does not lead us to call every natural effect the idea of its cauſe.

Neither did Mr LOCKE give due attention to the nature of ſenſation in general, when he affirmed, that the ideas of primary qualities, that is, the ſenſations excited by them, are reſemblances of thoſe qualities.

That there can be nothing like ſenſation in an inſentient being, or like thought in an unthinking being, is ſelf-evident, and has been ſhown, to the conviction of all men that think, by Biſhop BERKELEY; yet this was unknown to Mr LOCKE. It is an humbling conſideration, that, in ſubjects of this kind, ſelf-evident truths may be hid from the eyes of the moſt ingenious men. But we have, withal, this conſolation, that, when once diſcovered, they ſhine by their own light; and that light can no more be put out.

Upon the whole, Mr LOCKE, in making ſecondary qualities to be

be powers in bodies to excite certain ſenſations in us, has given a juſt and diſtinct analyſis of what our ſenſes diſcover concerning them; but, in applying the theory of ideas to them, and to the primary qualities, he has been led to ſay things that darken the ſubject, and that will not bear examination.

Biſhop BERKELEY having adopted the ſentiments common to Philoſophers, concerning the ideas we have by our ſenſes, to wit, that they are all ſenſations, ſaw more clearly the neceſſary conſequence of this doctrine; which is, that there is no material world; no qualities primary or ſecondary; and, conſequently, no foundation for any diſtinction between them. He expoſed the abſurdity of a reſemblance between our ſenſations and any quality, primary or ſecondary, of a ſubſtance that is ſuppoſed to be inſentient. Indeed, if it is granted that the ſenſes have no other office but to furniſh us with ſenſations, it will be found impoſſible to make any diſtinction between primary and ſecondary qualities, or even to maintain the exiſtence of a material world.

From the account I have given of the various revolutions in the opinions of Philoſophers about primary and ſecondary qualities, I think it appears, that all the darkneſs and intricacy that thinking men have found in this ſubject, and the errors they have fallen into, have been owing to the difficulty of diſtinguiſhing clearly ſenſation from perception; what we feel from what we perceive.

The external ſenſes have a double province; to make us feel, and to make us perceive. They furniſh us with a variety of ſenſations, ſome pleaſant, others painful, and others indifferent; at the ſame time they give us a conception, and an invincible belief of the exiſtence of external objects. This conception of external objects is the work of Nature. The belief of their exiſtence, which our ſenſes give, is the work of Nature; ſo likewiſe is the ſenſation that accompanies it. This conception and belief which Nature produces by means of the ſenſes, we call *perception*. The feeling which

CHAP. XVII. which goes along with the perception, we call *ſenſation*. The perception and its correſponding ſenſation are produced at the ſame time. In our experience we never find them disjoined. Hence we are led to conſider them as one thing, to give them one name, and to confound their different attributes. It becomes very difficult to ſeparate them in thought, to attend to each by itſelf, and to attribute nothing to it which belongs to the other.

To do this requires a degree of attention to what paſſes in our own minds, and a talent of diſtinguiſhing things that differ, which is not to be expected in the vulgar, and is even rarely found in Philoſophers; ſo that the progreſs made in a juſt analyſis of the operations of our ſenſes has been very ſlow. The hypotheſis of ideas, ſo generally adopted, hath, as I apprehend, greatly retarded this progreſs, and we might hope for a quicker advance, if Philoſophers could ſo far humble themſelves as to believe, that in every branch of the philoſophy of Nature, the productions of human fancy and conjecture will be found to be droſs; and that the only pure metal that will endure the teſt, is what is diſcovered by patient obſervation, and chaſte induction.

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Of other Objects of Perception.

BESIDES primary and ſecondary qualities of bodies, there are many other immediate objects of perception. Without pretending to a complete enumeration, I think they moſtly fall under one or other of the following claſſes. 1*ſt*, Certain ſtates or conditions of our own bodies. 2*d*, Mechanical powers or forces. 3*d*, Chemical powers. 4*th*, Medical powers or virtues. 5*th*, Vegetable and animal powers.

That

That we perceive certain diſorders in our own bodies by means of uneaſy ſenſations, which Nature hath conjoined with them, will not be diſputed. Of this kind are toothach, headach, gout, and every diſtemper and hurt which we feel. The notions which our ſenſe gives of theſe, have a ſtrong analogy to our notions of ſecondary qualities. Both are ſimilarly compounded, and may be ſimilarly reſolved, and they give light to each other.

In the toothach, for inſtance, there is, *firſt*, a painful feeling; and, *ſecondly*, a conception and belief of ſome diſorder in the tooth, which is believed to be the cauſe of the uneaſy feeling. The firſt of theſe is a ſenſation, the ſecond is perception; for it includes a conception and belief of an external object. But theſe two things, though of different natures, are ſo conſtantly conjoined in our experience, and in our imagination, that we conſider them as one. We give the ſame name to both; for the toothach is the proper name of the pain we feel; and it is the proper name of the diſorder in the tooth which cauſes that pain. If it ſhould be made a queſtion, whether the toothach be in the mind that feels it, or in the tooth that is affected? much might be ſaid on both ſides, while it is not obſerved that the word has two meanings. But a little reflection ſatisfies us, that the pain is in the mind, and the diſorder in the tooth. If ſome Philoſopher ſhould pretend to have made a diſcovery, that the toothach, the gout, the headach, are only ſenſations in the mind, and that it is a vulgar error to conceive that they are diſtempers of the body, he might defend his ſyſtem in the ſame manner as thoſe, who affirm that there is no ſound nor colour nor taſte in bodies, defend that paradox. But both theſe ſyſtems, like moſt paradoxes, will be found to be only an abuſe of words.

We ſay that we *feel* the toothach, not that we perceive it. On the other hand, we ſay that we *perceive* the colour of a body, not that we feel it. Can any reaſon be given for this difference of

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phraſeology? In anſwer to this queſtion, I apprehend, that both when we feel the toothach, and when we ſee a coloured body, there is ſenſation and perception conjoined. But, in the toothach, the ſenſation being very painful, engroſſes the attention; and therefore we ſpeak of it, as if it were felt only, and not perceived: Whereas, in ſeeing a coloured body, the ſenſation is indifferent, and draws no attention. The quality in the body, which we call its colour, is the only object of attention; and therefore we ſpeak of it, as if it were perceived, and not felt. Though all Philoſophers agree that in ſeeing colour there is ſenſation, it is not eaſy to perſuade the vulgar, that, in ſeeing a coloured body, when the light is not too ſtrong, nor the eye inflamed, they have any ſenſation or feeling at all.

There are ſome ſenſations, which, though they are very often felt, are never attended to, nor reflected upon. We have no conception of them; and therefore, in language, there is neither any name for them, nor any form of ſpeech that ſuppoſes their exiſtence. Such are the ſenſations of colour, and of all primary qualities; and therefore thoſe qualities are ſaid to be perceived, but not to be felt. Taſte and ſmell, and heat and cold, have ſenſations that are often agreeable or diſagreeable, in ſuch a degree as to draw our attention; and they are ſometimes ſaid to be felt, and ſometimes to be perceived. When diſorders of the body occaſion very acute pain, the uneaſy ſenſation engroſſes the attention, and they are ſaid to be felt, not to be perceived.

There is another queſtion relating to phraſeology, which this ſubject ſuggeſts. A man ſays, he feels pain in ſuch a particular part of his body; in his toe, for inſtance. Now, reaſon aſſures us, that pain being a ſenſation, can only be in the ſentient being, as its ſubject, that is, in the mind. And though Philoſophers have diſputed much about the place of the mind; yet none of them ever placed it in the toe. What ſhall we ſay then in this caſe? do our ſenſes really deceive us, and make us believe a thing which our reaſon determines to be impoſſible? I anſwer,

anſwer, *firſt*, That, when a man ſays he has pain in his toe, he is perfectly underſtood, both by himſelf, and thoſe who hear him. This is all that he intends. He really feels what he and all men call a pain in the toe; and there is no deception in the matter. Whether therefore there be any impropriety in the phraſe or not, is of no conſequence in common life. It anſwers all the ends of ſpeech, both to the ſpeaker and the hearers. CHAP. XVIII.

In all languages, there are phraſes which have a diſtinct meaning; while, at the ſame time, there may be ſomething in the ſtructure of them that diſagrees with the analogy of grammar, or with the principles of philoſophy. And the reaſon is, becauſe language is not made either by Grammarians or Philoſophers. Thus we ſpeak of feeling pain, as if pain was ſomething diſtinct from the feeling of it. We ſpeak of a pain coming and going, and removing from one place to another. Such phraſes are meant by thoſe who uſe them in a ſenſe that is neither obſcure nor falſe. But the Philoſopher puts them into his alembic, reduces them to their firſt principles, draws out of them a ſenſe that was never meant, and ſo imagines that he has diſcovered an error of the vulgar.

I obſerve, *ſecondly*, That, when we conſider the ſenſation of pain by itſelf, without any reſpect to its cauſe, we cannot ſay with propriety, that the toe is either the place, or the ſubject of it. But it ought to be remembered, that when we ſpeak of pain in the toe, the ſenſation is combined in our thought, with the cauſe of it, which really is in the toe. The cauſe and the effect are combined in one complex notion, and the ſame name ſerves for both. It is the buſineſs of the Philoſopher to analyſe this complex notion, and to give different names to its different ingredients. He gives the name of *pain* to the ſenſation only, and the name of *diſorder* to the unknown cauſe of it. Then it is evident that the diſorder only is in the toe, and that it would be an error to think that the pain is in it. But we ought not to aſcribe this error to the

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vulgar, who never made the diſtinction, and who under the name of pain comprehend both the ſenſation and its cauſe.

Caſes ſometimes happen, which give occaſion even to the vulgar to diſtinguiſh the painful ſenſation from the diſorder which is the cauſe of it. A man who has had his leg cut off, many years after feels pain in a toe of that leg. The toe has now no exiſtence; and he perceives eaſily, that the toe can neither be the place, nor the ſubject of the pain which he feels; yet it is the ſame feeling he uſed to have from a hurt in the toe; and if he did not know that his leg was cut off, it would give him the ſame immediate conviction of ſome hurt or diſorder in the toe.

The ſame phænomenon may lead the Philoſopher, in all caſes, to diſtinguiſh ſenſation from perception. We ſay, that the man had a deceitful feeling, when he felt a pain in his toe after the leg was cut off; and we have a true meaning in ſaying ſo. But, if we will ſpeak accurately, our ſenſations cannot be deceitful; they muſt be what we feel them to be, and can be nothing elſe. Where then lies the deceit? I anſwer, it lies not in the ſenſation, which is real, but in the ſeeming perception he had of a diſorder in his toe. This perception, which Nature had conjoined with the ſenſation, was in this inſtance fallacious.

The ſame reaſoning may be applied to every phænomenon that can, with propriety, be called a deception of ſenſe. As when one, who has the jaundice, ſees a body yellow, which is really white; or when a man ſees an object double, becauſe his eyes are not both directed to it; in theſe, and other like caſes, the ſenſations we have are real, and the deception is only in the perception which Nature has annexed to them.

Nature has connected our perception of external objects with certain ſenſations. If the ſenſation is produced, the correſponding perception follows even when there is no object, and in that caſe

caſe is apt to deceive us. In like manner, Nature has connected our ſenſations with certain impreſſions that are made upon the nerves and brain: And, when the impreſſion is made, from whatever cauſe, the correſponding ſenſation and perception immediately follows. Thus, in the man who feels pain in his toe after the leg is cut off, the nerve that went to the toe, part of which was cut off with the leg, had the ſame impreſſion made upon the remaining part, which, in the natural ſtate of his body, was cauſed by a hurt in the toe: And immediately this impreſſion is followed by the ſenſation and perception which Nature connected with it.

In like manner, if the ſame impreſſions, which are made at preſent upon my optic nerves by the objects before me, could be made in the dark, I apprehend that I ſhould have the ſame ſenſations, and ſee the ſame objects which I now ſee. The impreſſions and ſenſations would in ſuch a caſe be real, and the perception only fallacious.

Let us next conſider the notions which our ſenſes give us of thoſe attributes of bodies called *powers*. This is the more neceſſary, becauſe power ſeems to imply ſome activity; yet we conſider body as a dead inactive thing, which does not act, but may be acted upon.

Of the mechanical powers aſcribed to bodies, that which is called their *vis inſita*, or *inertia*, may firſt be conſidered. By this is meant, no more than that bodies never change their ſtate of themſelves, either from reſt to motion, or from motion to reſt, or from one degree of velocity, or one direction to another. In order to produce any ſuch change, there muſt be ſome force impreſſed upon them; and the change produced is preciſely proportioned to the force impreſſed, and in the direction of that force.

That all bodies have this property, is a matter of fact, which we learn from daily obſervation, as well as from the moſt accurate

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accurate experiments. Now it ſeems plain, that this does not imply any activity in body, but rather the contrary. A power in body to change its ſtate, would much rather imply activity than its continuing in the ſame ſtate: So that, although this property of bodies is called their *vis inſita*, or *vis inertiæ*, it implies no proper activity.

If we conſider, next, the power of gravity, it is a fact, that all the bodies of our planetary ſyſtem gravitate towards each other. This has been fully proved by the great NEWTON. But this gravitation is not conceived by that Philoſopher to be a power inherent in bodies, which they exert of themſelves, but a force impreſſed upon them, to which they muſt neceſſarily yield. Whether this force be impreſſed by ſome ſubtile æther, or whether it be impreſſed by the power of the Supreme Being, or of ſome ſubordinate ſpiritual being, we do not know; but all ſound natural philoſophy, particularly that of NEWTON, ſuppoſes it to be an impreſſed force, and not inherent in bodies.

So that, when bodies gravitate, they do not properly act, but are acted upon: They only yield to an impreſſion that is made upon them. It is common in language to expreſs, by active verbs, many changes in things, wherein they are merely paſſive: And this way of ſpeaking is uſed chiefly when the cauſe of the change is not obvious to ſenſe. Thus we ſay that a ſhip ſails, when every man of common ſenſe knows that ſhe has no inherent power of motion, and is only driven by wind and tide. In like manner, when we ſay that the planets gravitate towards the ſun, we mean no more, but that, by ſome unknown power, they are drawn or impelled in that direction.

What has been ſaid of the power of gravitation may be applied to other mechanical powers, ſuch as coheſion, magnetiſm, electricity; and no leſs to chemical and medical powers. By all theſe, certain effects are produced, upon the application of one body to another.

another. Our ſenſes diſcover the effect; but the power is latent. We know there muſt be a cauſe of the effect, and we form a relative notion of it from its effect; and very often the ſame name is uſed to ſignify the unknown cauſe, and the known effect.

We aſcribe to vegetables, the powers of drawing nouriſhment, growing and multiplying their kind. Here likewiſe the effect is manifeſt, but the cauſe is latent to ſenſe. Theſe powers, therefore, as well as all the other powers we aſcribe to bodies, are unknown cauſes of certain known effects. It is the buſineſs of philoſophy to inveſtigate the nature of thoſe powers as far as we are able, but our ſenſes leave us in the dark.

We may obſerve a great ſimilarity in the notions which our ſenſes give us of ſecondary qualities, of the diſorders we feel in our own bodies, and of the various powers of bodies which we have enumerated. They are all obſcure and relative notions, being a conception of ſome unknown cauſe of a known effect. Their names are, for the moſt part, common to the effect, and to its cauſe; and they are a proper ſubject of philoſophical diſquiſition. They might therefore, I think, not improperly, be called *occult* qualities.

This name indeed is fallen into diſgrace ſince the time of DES CARTES. It is ſaid to have been uſed by the Peripatetics to cloke their ignorance, and to ſtop all enquiry into the nature of thoſe qualities called *occult.* Be it ſo. Let thoſe anſwer for this abuſe of the word who were guilty of it. To call a thing occult, if we attend to the meaning of the word, is rather modeſtly to confeſs ignorance, than to cloke it. It is to point it out as a proper ſubject for the inveſtigation of Philoſophers, whoſe proper buſineſs it is to better the condition of humanity, by diſcovering what was before hid from human knowledge.

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CHAP. XVIII. Were I therefore to make a diviſion of the qualities of bodies as they appear to our ſenſes, I would divide them firſt into thoſe that are *manifeſt*, and thoſe that are *occult*. The manifeſt qualities are thoſe which Mr LOCKE calls *primary*; ſuch as extenſion, figure, diviſibility, motion, hardneſs, ſoftneſs, fluidity. The nature of theſe is manifeſt even to ſenſe; and the buſineſs of the Philoſopher with regard to them, is not to find out their nature, which is well known, but to diſcover the effects produced by their various combinations; and with regard to thoſe of them which are not eſſential to matter, to diſcover their cauſes as far as he is able.

The ſecond claſs conſiſts of occult qualities, which may be ſubdivided into various kinds; as *firſt*, the ſecondary qualities; *ſecondly*, the diſorders we feel in our own bodies; and, *thirdly*, all the qualities which we call powers of bodies, whether mechanical, chemical, medical, animal or vegetable; or if there be any other powers not comprehended under theſe heads. Of all theſe the exiſtence is manifeſt to ſenſe, but the nature is occult; and here the Philoſopher has an ample field.

What is neceſſary for the conduct of our animal life, the bountiful Author of Nature hath made manifeſt to all men. But there are many other choice ſecrets of Nature, the diſcovery of which enlarges the power, and exalts the ſtate of man. Theſe are left to be diſcovered by the proper uſe of our rational powers. They are hid, not that they may be always concealed from human knowledge, but that we may be excited to ſearch for them. This is the proper buſineſs of a Philoſopher, and it is the glory of a man, and the beſt reward of his labour, to diſcover what Nature has thus concealed.

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CHAP. XIX.

Of Matter and of Space.

THE objects of ſenſe we have hitherto conſidered are qualities. But qualities muſt have a ſubject. We give the names of *matter*, *material ſubſtance*, and *body*, to the ſubject of ſenſible qualities; and it may be aſked, what this *matter* is?

I perceive in a billiard ball, figure, colour, and motion; but the ball is not figure, nor is it colour, nor motion, nor all theſe taken together; it is ſomething that has figure, and colour, and motion. This is a dictate of Nature, and the belief of all mankind.

As to the nature of this ſomething, I am afraid we can give little account of it, but that it has the qualities which our ſenſes diſcover.

But how do we know that they are qualities, and cannot exiſt without a ſubject? I confeſs I cannot explain how we know that they cannot exiſt without a ſubject, any more than I can explain how we know that they exiſt. We have the information of nature for their exiſtence; and I think we have the information of nature that they are qualities.

The belief that figure, motion, and colour, are qualities, and require a ſubject, muſt either be a judgment of nature, or it muſt be diſcovered by reaſon, or it muſt be a prejudice that has no juſt foundation. There are Philoſophers who maintain, that it is a mere prejudice; that a body is nothing but a collection of what we call ſenſible qualities; and that they neither have nor need any ſubject. This is the opinion of Biſhop BERKELEY and Mr HUME; and they were led to it by finding, that they had not in their minds any

CHAP. XIX idea of ſubſtance. It could neither be an idea of ſenſation nor of reflection.

But to me nothing ſeems more abſurd, than that there ſhould be extenſion without any thing extended; or motion without any thing moved; yet I cannot give reaſons for my opinion, becauſe it ſeems to me ſelf-evident, and an immediate dictate of my nature.

And that it is the belief of all mankind, appears in the ſtructure of all languages; in which we find adjective nouns uſed to expreſs ſenſible qualities. It is well known that every adjective in language muſt belong to ſome ſubſtantive expreſſed or underſtood; that is, every quality muſt belong to ſome ſubject.

Senſible qualities make ſo great a part of the furniture of our minds, their kinds are ſo many, and their number ſo great, that if prejudice, and not nature, teach us to aſcribe them all to a ſubject, it muſt have a great work to perform, which cannot be accompliſhed in a ſhort time, nor carried on to the ſame pitch in every individual. We ſhould find not individuals only, but nations and ages, differing from each other in the progreſs which this prejudice had made in their ſentiments; but we find no ſuch difference among men. What one man accounts a quality, all men do, and ever did.

It ſeems therefore to be a judgment of nature, that the things immediately perceived are qualities, which muſt belong to a ſubject; and all the information that our ſenſes give us about this ſubject, is, that it is that to which ſuch qualities belong. From this it is evident, that our notion of body or matter, as diſtinguiſhed from its qualities, is a relative notion; and I am afraid it muſt always be obſcure until men have other faculties.

The Philoſopher in this ſeems to have no advantage above the vulgar; for as they perceive colour, and figure, and motion by their

their ſenſes as well as he does, and both are equally certain that there is a ſubject of thoſe qualities, ſo the notions which both have of this ſubject are equally obſcure. When the Philoſopher calls it a *ſubſtratum*, and a ſubject of inheſion, thoſe learned words convey no meaning but what every man underſtands and expreſſes, by ſaying in common language, that it is a thing extended, and ſolid, and moveable.

The relation which ſenſible qualities bear to their ſubject, that is, to body, is not, however, ſo dark, but that it is eaſily diſtinguiſhed from all other relations. Every man can diſtinguiſh it from the relation of an effect to its cauſe; of a mean to its end; or of a ſign to the thing ſignified by it.

I think it requires ſome ripeneſs of underſtanding to diſtinguiſh the qualities of a body from the body. Perhaps this diſtinction is not made by brutes, nor by infants; and if any one thinks that this diſtinction is not made by our ſenſes, but by ſome other power of the mind, I will not diſpute this point, provided it be granted, that men, when their faculties are ripe, have a natural conviction, that ſenſible qualities cannot exiſt by themſelves without ſome ſubject to which they belong.

I think, indeed, that ſome of the determinations we form concerning matter cannot be deduced ſolely from the teſtimony of ſenſe, but muſt be referred to ſome other ſource.

There ſeems to be nothing more evident, than that all bodies muſt conſiſt of parts; and that every part of a body is a body, and a diſtinct being which may exiſt without the other parts; and yet I apprehend this concluſion is not deduced ſolely from the teſtimony of ſenſe: For, beſides that it is a neceſſary truth, and therefore no object of ſenſe, there is a limit beyond which we cannot perceive any diviſion of a body. The parts become too ſmall to be perceived by our ſenſes; but we cannot believe that it becomes

CHAP. XIX. then incapable of being farther divided, or that ſuch diviſion would make it not to be a body.

We carry on the diviſion and ſubdiviſion in our thought far beyond the reach of our ſenſes, and we can find no end to it: Nay, I think we plainly diſcern, that there can be no limit beyond which the diviſion cannot be carried.

For if there be any limit to this diviſion, one of two things muſt neceſſarily happen. Either we have come by diviſion to a body which is extended, but has no parts, and is abſolutely indiviſible; or this body is diviſible, but as ſoon as it is divided, it becomes no body. Both theſe poſitions ſeem to me abſurd, and one or the other is the neceſſary conſequence of ſuppoſing a limit to the diviſibility of matter.

On the other hand, if it is admitted that the diviſibility of matter has no limit, it will follow, that no body can be called one individual ſubſtance. You may as well call it two, or twenty, or two hundred. For when it is divided into parts, every part is a being or ſubſtance diſtinct from all the other parts, and was ſo even before the diviſion: Any one part may continue to exiſt, though all the other parts were annihilated.

There is, indeed, a principle long received, as an axiom in metaphyſics, which I cannot reconcile to the diviſibility of matter. It is, That every being is one, *omne ens eſt unum.* By which, I ſuppoſe, is meant, that every thing that exiſts muſt either be one indiviſible being, or compoſed of a determinate number of indiviſible beings. Thus an army may be divided into regiments, a regiment into companies, and a company into men. But here the diviſion has its limit; for you cannot divide a man without deſtroying him, becauſe he is an individual; and every thing, according to this axiom, muſt be an individual, or made up of individuals.

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That this axiom will hold with regard to an army, and with regard to many other things, muſt be granted: But I require the evidence of its being applicable to all beings whatſoever.

LEIBNITZ, conceiving that all beings muſt have this metaphyſical unity, was by this led to maintain, that matter, and indeed the whole univerſe, is made up of monades, that is, ſimple and indiviſible ſubſtances.

Perhaps the ſame apprehenſion might lead BOSCOVICK into his hypotheſis, which ſeems much more ingenious; to wit, that matter is compoſed of a definite number of mathematical points, endowed with certain powers of attraction and repulſion.

The diviſibility of matter without any limit, ſeems to me more tenable than either of theſe hypotheſes; nor do I lay much ſtreſs upon the metaphyſical axiom, conſidering its origin. Metaphyſicians thought proper to make the attributes common to all beings the ſubject of a ſcience. It muſt be a matter of ſome difficulty to find out ſuch attributes: And, after racking their invention, they have ſpecified three, to wit, unity, verity, and goodneſs; and theſe, I ſuppoſe, have been invented to make a number, rather than from any clear evidence of their being univerſal.

There are other determinations concerning matter, which, I think, are not ſolely founded upon the teſtimony of ſenſe: Such as, that it is impoſſible that two bodies ſhould occupy the ſame place at the ſame time; or that the ſame body ſhould be in different places at the ſame time; or that a body can be moved from one place to another, without paſſing through the intermediate places, either in a ſtraight courſe, or by ſome circuit. Theſe appear to be neceſſary truths, and therefore cannot be concluſions of our ſenſes; for our ſenſes teſtify only what is, and not what muſt neceſſarily be.

CHAP. XIX. We are next to conſider our notion of ſpace. It may be obſerved, that although ſpace be not perceived by any of our ſenſes when all matter is removed; yet, when we perceive any of the primary qualities, ſpace preſents itſelf as a neceſſary concomitant: For there can neither be extenſion, nor motion, nor figure, nor diviſion, nor coheſion of parts without ſpace.

There are only two of our ſenſes by which the notion of ſpace enters into the mind; to wit, touch and ſight. If we ſuppoſe a man to have neither of theſe ſenſes, I do not ſee how he could ever have any conception of ſpace. Suppoſing him to have both, until he ſees or feels other objects, he can have no notion of ſpace: It has neither colour nor figure to make it an object of ſight: It has no tangible quality to make it an object of touch. But other objects of ſight and touch carry the notion of ſpace along with them; and not the notion only, but the belief of it: For a body could not exiſt if there was no ſpace to contain it: It could not move if there was no ſpace: Its ſituation, its diſtance, and every relation it has to other bodies, ſuppoſe ſpace.

But though the notion of ſpace ſeems not to enter at firſt into the mind, until it is introduced by the proper objects of ſenſe; yet, being once introduced, it remains in our conception and belief, though the objects which introduced it be removed. We ſee no abſurdity in ſuppoſing a body to be annihilated; but the ſpace that contained it remains; and to ſuppoſe that annihilated, ſeems to be abſurd. It is ſo much allied to nothing or emptineſs, that it ſeems incapable of annihilation or of creation.

Space not only retains a firm hold of our belief, even when we ſuppoſe all the objects that introduced it to be annihilated, but it ſwells to immenſity. We can ſet no limits to it, either of extent or of duration. Hence we call it immenſe, eternal, immoveable, and indeſtructible. But it is only an immenſe, eternal, immoveable, and indeſtructible void or emptineſs. Perhaps we may apply

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to it what the Peripatetics ſaid of their firſt matter, that whatever it is, it is potentially only, not actually.

When we conſider parts of ſpace that have meaſure and figure, there is nothing we underſtand better, nothing about which we can reaſon ſo clearly, and to ſo great extent. Extenſion and figure are circumſcribed parts of ſpace, and are the object of geometry, a ſcience in which human reaſon has the moſt ample field, and can go deeper, and with more certainty than in any other. But when we attempt to comprehend the whole of ſpace, and to trace it to its origin, we loſe ourſelves in the ſearch. The profound ſpeculations of ingenious men upon this ſubject differ ſo widely, as may lead us to ſuſpect, that the line of human underſtanding is too ſhort to reach the bottom of it.

Biſhop BERKELEY, I think, was the firſt who obſerved, that the extenſion, figure, and ſpace, of which we ſpeak in common language, and of which geometry treats, are originally perceived by the ſenſe of touch only; but that there is a notion of extenſion, figure, and ſpace, which may be got by ſight, without any aid from touch. To diſtinguiſh theſe, he calls the firſt tangible extenſion, tangible figure, and tangible ſpace; the laſt he calls viſible.

As I think this diſtinction very important in the philoſophy of our ſenſes, I ſhall adopt the names uſed by the inventor to expreſs it; remembering what has been already obſerved, that ſpace, whether tangible or viſible, is not ſo properly an object of ſenſe, as a neceſſary concomitant of the objects both of ſight and touch.

The reader may likewiſe be pleaſed to attend to this, that when I uſe the names of tangible and viſible ſpace, I do not mean to adopt Biſhop BERKELEY's opinion, ſo far as to think that they are really different things, and altogether unlike. I take them to be different conceptions of the ſame thing; the one very partial, and the

CHAP. XIX. the other more complete; but both diſtinct and juſt, as far as they reach.

Thus when I ſee a ſpire at a very great diſtance, it ſeems like the point of a bodkin; there appears no vane at the top, no angles. But when I view the ſame object at a ſmall diſtance, I ſee a huge pyramid of ſeveral angles with a vane on the top. Neither of theſe appearances is fallacious. Each of them is what it ought to be, and what it muſt be, from ſuch an object ſeen at ſuch different diſtances. Theſe different appearances of the ſame object may ſerve to illuſtrate the different conceptions of ſpace, according as they are drawn from the information of ſight alone, or as they are drawn from the additional information of touch.

Our ſight alone, unaided by touch, gives a very partial notion of ſpace, but yet a diſtinct one. When it is conſidered, according to this partial notion, I call it viſible ſpace. The ſenſe of touch gives a much more complete notion of ſpace; and when it is conſidered according to this notion, I call it tangible ſpace. Perhaps there may be intelligent beings of a higher order, whoſe conceptions of ſpace are much more complete than thoſe we have from both ſenſes. Another ſenſe added to thoſe of ſight and touch, might, for what I know, give us conceptions of ſpace, as different from thoſe we can now attain, as tangible ſpace is from viſible; and might reſolve many knotty points concerning it, which, from the imperfection of our faculties, we cannot by any labour untie.

BERKELEY acknowledges that there is an exact correſpondence between the viſible figure and magnitude of objects, and the tangible; and that every modification of the one has a modification of the other correſponding. He acknowledges likewiſe, that Nature has eſtabliſhed ſuch a connection between the viſible figure and magnitude of an object, and the tangible, that we learn by experience to know the tangible figure and magnitude from the viſible. And having been accuſtomed to do ſo from infancy, we get

get the habit of doing it with ſuch facility and quickneſs, that we think we ſee the tangible figure, magnitude, and diſtance of bodies, when, in reality, we only collect thoſe tangible qualities from the correſponding viſible qualities, which are natural ſigns of them.

The correſpondence and connection which BERKELEY ſhews to be between the viſible figure, and magnitude of objects, and their tangible figure and magnitude, is in ſome reſpects very ſimilar to that which we have obſerved between our ſenſations, and the primary qualities with which they are connected. No ſooner is the ſenſation felt, than immediately we have the conception and belief of the correſponding quality. We give no attention to the ſenſation; it has not a name; and it is difficult to perſuade us that there was any ſuch thing.

In like manner, no ſooner is the viſible figure and magnitude of an object ſeen, than immediately we have the conception and belief of the correſponding tangible figure and magnitude. We give no attention to the viſible figure and magnitude. It is immediately forgot, as if it had never been perceived; and it has no name in common language; and indeed, until BERKELEY pointed it out as a ſubject of ſpeculation, and gave it a name, it had none among Philoſophers, excepting in one inſtance, relating to the heavenly bodies, which are beyond the reach of touch. With regard to them, what BERKELEY calls viſible magnitude, was, by Aſtronomers, called apparent magnitude.

There is ſurely an apparent magnitude, and an apparent figure of terreſtrial objects, as well as of celeſtial; and this is what BERKELEY calls their viſible figure and magnitude. But this was never made an object of thought among Philoſophers, until that author gave it a name, and obſerved the correſpondence and connection between it and tangible magnitude and figure, and how the mind gets the habit of paſſing ſo inſtantaneouſly from the viſible figure, as a ſign to the tangible figure, as the thing ſigni-

CHAP. XIX. fied by it, that the firſt is perfectly forgot, as if it had never been perceived.

Viſible figure, extenſion and ſpace, may be made a ſubject of mathematical ſpeculation, as well as the tangible. In the viſible, we find two dimenſions only; in the tangible three. In the one, magnitude is meaſured by angles; in the other by lines. Every part of viſible ſpace bears ſome proportion to the whole; but tangible ſpace being immenſe, any part of it bears no proportion to the whole.

Such differences in their properties led Biſhop BERKELEY to think, that viſible and tangible magnitude and figure, are things totally different and diſſimilar, and cannot both belong to the ſame object.

And upon this diſſimilitude is grounded one of the ſtrongeſt arguments by which his ſyſtem is ſupported. For it may be ſaid, if there be external objects which have a real extenſion and figure, it muſt be either tangible extenſion and figure, or viſible, or both. The laſt appears abſurd; nor was it ever maintained by any man, that the ſame object has two kinds of extenſion and figure, totally diſſimilar. There is then only one of the two really in the object; and the other muſt be ideal. But no reaſon can be aſſigned why the perceptions of one ſenſe ſhould be real, while thoſe of another are only ideal; and he who is perſuaded that the objects of ſight are ideas only, has equal reaſon to believe ſo of the objects of touch.

This argument, however, loſes all its force, if it be true, as was formerly hinted, that viſible figure and extenſion are only a partial conception, and the tangible figure and extenſion a more complete conception of that figure and extenſion which is really in the object.

It has been proved very fully by Biſhop BERKELEY, that ſight alone,

alone, without any aid from the informations of touch, gives us no perception, nor even conception of the diſtance of any object from the eye. But he was not aware, that this very principle overturns the argument for his ſyſtem, taken from the difference between viſible and tangible extenſion and figure: For, ſuppoſing external objects to exiſt, and to have that tangible extenſion and figure which we perceive, it follows demonſtrably, from the principle now mentioned, that their viſible extenſion and figure muſt be juſt what we ſee it to be.

The rules of perſpective, and of the projection of the ſphere, which is a branch of perſpective, are demonſtrable. They ſuppoſe the exiſtence of external objects, which have a tangible extenſion and figure; and, upon that ſuppoſition, they demonſtrate what muſt be the viſible extenſion and figure of ſuch objects, when placed in ſuch a poſition, and at ſuch a diſtance.

Hence it is evident, that the viſible figure and extenſion of objects is ſo far from being incompatible with the tangible, that the firſt is a neceſſary conſequence from the laſt, in beings that ſee as we do. The correſpondence between them is not arbitrary, like that between words and the thing they ſignify, as BERKELEY thought; but it reſults neceſſarily from the nature of the two ſenſes; and this correſpondence being always found in experience to be exactly what the rules of perſpective ſhow that it ought to be if the ſenſes give true information, is an argument of the truth of both.

CHAP. XX.

Of the Evidence of Senſe, and of Belief in general.

THE intention of Nature in the powers which we call the external ſenſes, is evident. They are intended to give us that information of external objects which the ſupreme Being ſaw to

CHAP. XX. be proper for us in our preſent ſtate; and they give to all mankind the information neceſſary for life, without reaſoning, without any art or inveſtigation on our part.

The moſt uninſtructed peaſant has as diſtinct a conception, and as firm a belief of the immediate objects of his ſenſes, as the greateſt Philoſopher; and with this he reſts ſatisfied, giving himſelf no concern how he came by this conception and belief. But the Philoſopher is impatient to know how his conception of external objects, and his belief of their exiſtence, is produced. This, I am afraid, is hid in impenetrable darkneſs. But where there is no knowledge, there is the more room for conjecture; and of this Philoſophers have always been very liberal.

The dark cave and ſhadows of PLATO, the ſpecies of ARISTOTLE, the films of EPICURUS, and the ideas and impreſſions of modern Philoſophers, are the productions of human fancy, ſucceſſively invented to ſatisfy the eager deſire of knowing how we perceive external objects; but they are all deficient in the two eſſential characters of a true and philoſophical account of the phænomenon: For we neither have any evidence of their exiſtence, nor, if they did exiſt, can it be ſhewn how they would produce perception.

It was before obſerved, that there are two ingredients in this operation of perception: *Firſt*, The conception or notion of the object; and, *ſecondly*, The belief of its preſent exiſtence; both are unaccountable.

That we can aſſign no adequate cauſe of our firſt conceptions of things, I think, is now acknowledged by the moſt enlightened Philoſophers. We know that ſuch is our conſtitution, that in certain circumſtances we have certain conceptions; but how they are produced, we know no more than how we ourſelves were produced.

When we have got the conception of external objects by our ſenſes,

ſenſes, we can analyſe them in our thought into their ſimple ingredients; and we can compound thoſe ingredients into various new forms, which the ſenſes never preſented. But it is beyond the power of human imagination to form any conception, whoſe ſimple ingredients have not been furniſhed by Nature in a manner unaccountable to our underſtanding.

We have an immediate conception of the operations of our own minds, joined with a belief of their exiſtence; and this we call conſciouſneſs. But this is only giving a name to this ſource of our knowledge. It is not a diſcovery of its cauſe. In like manner, we have, by our external ſenſes, a conception of external objects, joined with a belief of their exiſtence; and this we call perception. But this is only giving a name to another ſource of our knowledge, without diſcovering its cauſe.

We know, that when certain impreſſions are made upon our organs, nerves, and brain, certain correſponding ſenſations are felt, and certain objects are both conceived and believed to exiſt. But in this train of operations Nature works in the dark. We can neither diſcover the cauſe of any one of them, nor any neceſſary connection of one with another: And whether they are connected by any neceſſary tie, or only conjoined in our conſtitution by the will of Heaven, we know not.

That any kind of impreſſion upon a body ſhould be the efficient cauſe of ſenſation, appears very abſurd. Nor can we perceive any neceſſary connection between ſenſation and the conception and belief of an external object. For any thing we can diſcover, we might have been ſo framed as to have all the ſenſations we now have by our ſenſes, without any impreſſions upon our organs, and without any conception of any external object. For any thing we know, we might have been ſo made as to perceive external objects, without any impreſſions on bodily organs, and without any

of

CHAP. XX. of thoſe ſenſations which invariably accompany perception in our preſent frame.

If our conception of external objects be unaccountable, the conviction and belief of their exiſtence, which we get by our ſenſes, is no leſs ſo.

Belief, aſſent, conviction, are words which I think do not admit of logical definition, becauſe the operation of mind ſignified by them is perfectly ſimple, and of its own kind. Nor do they need to be defined, becauſe they are common words, and well underſtood.

Belief muſt have an object. For he that believes, muſt believe ſomething; and that which he believes is called the object of his belief. Of this object of his belief, he muſt have ſome conception, clear or obſcure; for although there may be the moſt clear and diſtinct conception of an object without any belief of its exiſtence, there can be no belief without conception.

Belief is always expreſſed in language by a propoſition, wherein ſomething is affirmed or denied. This is the form of ſpeech which in all languages is appropriated to that purpoſe, and without belief there could be neither affirmation nor denial, nor ſhould we have any form of words to expreſs either. Belief admits of all degrees from the ſlighteſt ſuſpicion to the fulleſt aſſurance. Theſe things are ſo evident to every man that reflects, that it would be abuſing the reader's patience to dwell upon them.

I proceed to obſerve, that there are many operations of mind in which, when we analyſe them as far as we are able, we find belief to be an eſſential ingredient. A man cannot be conſcious of his own thoughts, without believing that he thinks. He cannot perceive an object of ſenſe, without believing that it exiſts. He cannot diſtinctly remember a paſt event without believing that it did

did exiſt. Belief therefore is an ingredient in conſciouſneſs, in perception, and in remembrance. CHAP. XX.

Not only in moſt of our intellectual operations, but in many of the active principles of the human mind, belief enters as an ingredient. Joy and ſorrow, hope and fear, imply a belief of good or ill, either preſent or in expectation. Eſteem, gratitude, pity, and reſentment, imply a belief of certain qualities in their objects. In every action that is done for an end, there muſt be a belief of its tendency to that end. So large a ſhare has belief in our intellectual operations, in our active principles, and in our actions themſelves, that as faith in things divine is repreſented as the main ſpring in the life of a Chriſtian, ſo belief in general is the main ſpring in the life of a man.

That men often believe what there is no juſt ground to believe, and thereby are led into hurtful errors, is too evident to be denied: And, on the other hand, that there are juſt grounds of belief, can as little be doubted by any man who is not a perfect ſceptic.

We give the name of evidence to whatever is a ground of belief. To believe without evidence is a weakneſs which every man is concerned to avoid, and which every man wiſhes to avoid. Nor is it in a man's power to believe any thing longer than he thinks he has evidence.

What this evidence is, is more eaſily felt than deſcribed. Thoſe who never reflected upon its nature, feel its influence in governing their belief. It is the buſineſs of the Logician to explain its nature, and to diſtinguiſh its various kinds and degrees; but every man of underſtanding can judge of it, and commonly judges right, when the evidence is fairly laid before him, and his mind is free from prejudice. A man who knows nothing of the theory of viſion, may have a good eye; and a man who never ſpeculated about evidence in the abſtract, may have a good judgment.

The

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The common occaſions of life lead us to diſtinguiſh evidence into different kinds, to which we give names that are well underſtood; ſuch as the evidence of ſenſe, the evidence of memory, the evidence of conſciouſneſs, the evidence of teſtimony, the evidence of axioms, the evidence of reaſoning: All men of common underſtanding agree, that each of theſe kinds of evidence may afford juſt ground of belief, and they agree very generally in the circumſtances that ſtrengthen or weaken them.

Philoſophers have endeavoured by analyſing the different ſorts of evidence, to find out ſome common nature wherein they all agree, and thereby to reduce them all to one. This was the aim of the ſchoolmen in their intricate diſputes about the criterion of truth. DES CARTES placed this criterion of truth in clear and diſtinct perception, and laid it down as a maxim, that whatever we clearly and diſtinctly perceive to be true, is true; but it is difficult to know what he underſtands by clear and diſtinct perception in this maxim. Mr LOCKE placed it in a perception of the agreement or diſagreement of our ideas, which perception is immediate in intuitive knowledge, and by the intervention of other ideas in reaſoning.

I confeſs that, although I have, as I think, a diſtinct notion of the different kinds of evidence above mentioned, and perhaps of ſome others, which it is unneceſſary here to enumerate, yet I am not able to find any common nature to which they may all be reduced. They ſeem to me to agree only in this, that they are all fitted by Nature to produce belief in the human mind, ſome of them in the higheſt degree, which we call certainty, others in various degrees according to circumſtances.

I ſhall take it for granted, that the evidence of ſenſe, when the proper circumſtances concur, is good evidence, and a juſt ground of belief. My intention in this place is only to compare it with the other kinds that have been mentioned, that we may judge whether

whether it be reducible to any of them, or of a nature peculiar to itſelf. CHAP. XX.

Firſt, It ſeems to be quite different from the evidence of reaſoning. All good evidence is commonly called reaſonable evidence, and very juſtly, becauſe it ought to govern our belief as reaſonable creatures. And, according to this meaning, I think the evidence of ſenſe no leſs reaſonable than that of demonſtration. If Nature give us information of things that concern us, by other means than by reaſoning, reaſon itſelf will direct us to receive that information with thankfulneſs, and to make the beſt uſe of it.

But when we ſpeak of the evidence of reaſoning as a particular kind of evidence, it means the evidence of propoſitions that are inferred by reaſoning, from propoſitions already known and believed. Thus the evidence of the fifth propoſition of the firſt book of EUCLID's Elements conſiſts in this, That it is ſhown to be the neceſſary conſequence of the axioms, and of the preceding propoſitions. In all reaſoning, there muſt be one or more premiſes, and a concluſion drawn from them. And the premiſes are called the reaſon why we muſt believe the concluſion which we ſee to follow from them.

That the evidence of ſenſe is of a different kind, needs little proof. No man ſeeks a reaſon for believing what he ſees or feels; and if he did, it would be difficult to find one. But though he can give no reaſon for believing his ſenſes, his belief remains as firm as if it were grounded on demonſtration.

Many eminent Philoſophers thinking it unreaſonable to believe, when they could not ſhow a reaſon, have laboured to furniſh us with reaſons for believing our ſenſes; but their reaſons are very inſufficient, and will not bear examination. Other Philoſophers have ſhewn very clearly the fallacy of theſe reaſons, and have, as they imagine, diſcovered invincible reaſons againſt this belief; but

CHAP. XX. they have never been able either to ſhake it in themſelves, or to convince others. The ſtateſman continues to plod, the ſoldier to fight, and the merchant to export and import, without being in the leaſt moved by the demonſtrations that have been offered of the non-exiſtence of thoſe things about which they are ſo ſeriouſly employed. And a man may as ſoon, by reaſoning, pull the moon out of her orbit, as deſtroy the belief of the objects of ſenſe.

Shall we ſay then that the evidence of ſenſe is the ſame with that of axioms, or ſelf-evident truths? I anſwer, *firſt*, That all modern Philoſophers ſeem to agree, that the exiſtence of the objects of ſenſe is not ſelf-evident, becauſe ſome of them have endeavoured to prove it by ſubtile reaſoning, others to refute it. Neither of theſe can conſider it as ſelf-evident.

Secondly, I would obſerve, that the word *axiom* is taken by Philoſophers in ſuch a ſenſe, as that the exiſtence of the objects of ſenſe cannot, with propriety, be called an axiom. They give the name of axiom only to ſelf-evident truths that are neceſſary, and are not limited to time and place, but muſt be true at all times, and in all places. The truths atteſted by our ſenſes are not of this kind; they are contingent, and limited to time and place.

Thus, that one is the half of two, is an axiom. It is equally true at all times, and in all places. We perceive, by attending to the propoſition itſelf, that it cannot but be true; and therefore it is called an eternal, neceſſary and immutable truth. That there is at preſent a chair on my right hand, and another on my left, is a truth atteſted by my ſenſes; but it is not neceſſary, nor eternal, nor immutable. It may not be true next minute; and therefore, to call it an axiom, would, I apprehend, be to deviate from the common uſe of the word.

Thirdly, If the word axiom be put to ſignify every truth which is

is known immediately, without being deduced from any antecedent truth, then the exiſtence of the objects of ſenſe may be called an axiom. For my ſenſes give me as immediate conviction of what they teſtify, as my underſtanding gives of what is commonly called an axiom.

There is no doubt an analogy between the evidence of ſenſe and the evidence of teſtimony. Hence we find in all languages the analogical expreſſions of the *teſtimony of ſenſe*, of giving *credit* to our ſenſes, and the like. But there is a real difference between the two, as well as a ſimilitude. In believing upon teſtimony, we rely upon the authority of a perſon who teſtifies: But we have no ſuch authority for believing our ſenſes.

Shall we ſay then that this belief is the inſpiration of the Almighty? I think this may be ſaid in a good ſenſe; for I take it to be the immediate effect of our conſtitution, which is the work of the Almighty. But if inſpiration be underſtood to imply a perſuaſion of its coming from God, our belief of the objects of ſenſe is not inſpiration; for a man would believe his ſenſes though he had no notion of a Deity. He who is perſuaded that he is the workmanſhip of God, and that it is a part of his conſtitution to believe his ſenſes, may think that a good reaſon to confirm his belief: But he had the belief before he could give this or any other reaſon for it.

If we compare the evidence of ſenſe with that of memory, we find a great reſemblance, but ſtill ſome difference. I remember diſtinctly to have dined yeſterday with ſuch a company. What is the meaning of this? it is, that I have a diſtinct conception and firm belief of this paſt event; not by reaſoning, not by teſtimony, but immediately from my conſtitution: And I give the name of memory to that part of my conſtitution, by which I have this kind of conviction of paſt events.

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I ſee a chair on my right hand. What is the meaning of this? it is, that I have, by my conſtitution, a diſtinct conception and firm belief of the preſent exiſtence of the chair in ſuch a place, and in ſuch a poſition; and I give the name of ſeeing to that part of my conſtitution, by which I have this immediate conviction. The two operations agree in the immediate conviction which they give. They agree in this alſo, that the things believed are not neceſſary, but contingent, and limited to time and place. But they differ in two reſpects; *firſt*, That memory has ſomething for its object that did exiſt in time paſt; but the object of ſight, and of all the ſenſes, muſt be ſomething which exiſts at preſent. And, *ſecondly*, That I ſee by my eyes, and only when they are directed to the object, and when it is illuminated. But my memory is not limited by any bodily organ that I know, nor by light and darkneſs, though it has its limitations of another kind.

Theſe differences are obvious to all men, and very reaſonably lead them to conſider ſeeing and remembering as operations ſpecifically different. But the nature of the evidence they give has a great reſemblance. A like difference and a like reſemblance there is between the evidence of ſenſe and that of conſciouſneſs, which I leave the reader to trace.

As to the opinion, that evidence conſiſts in a perception of the agreement or diſagreement of ideas, we may have occaſion to conſider it more particularly in another place. Here I only obſerve, that, when taken in the moſt favourable ſenſe, it may be applied with propriety to the evidence of reaſoning, and to the evidence of ſome axioms. But I cannot ſee how, in any ſenſe, it can be applied to the evidence of conſciouſneſs, to the evidence of memory, or to that of the ſenſes.

When I compare the different kinds of evidence above mentioned, I confeſs, after all, that the evidence of reaſoning, and that of ſome neceſſary and ſelf-evident truths, ſeems to be the leaſt myſterious,

rious, and the moſt perfectly comprehended; and therefore I do not think it ſtrange that Philoſophers ſhould have endeavoured to reduce all kinds of evidence to theſe.

When I ſee a propoſition to be ſelf-evident and neceſſary, and that the ſubject is plainly included in the predicate, there ſeems to be nothing more that I can deſire, in order to underſtand why I believe it. And when I ſee a conſequence that neceſſarily follows from one or more ſelf-evident propoſitions, I want nothing more with regard to my belief of that conſequence. The light of truth ſo fills my mind in theſe caſes, that I can neither conceive, nor deſire any thing more ſatisfying.

On the other hand, when I remember diſtinctly a paſt event, or ſee an object before my eyes, this commands my belief no leſs than an axiom. But when, as a Philoſopher, I reflect upon this belief, and want to trace it to its origin, I am not able to reſolve it into neceſſary and ſelf-evident axioms, or concluſions that are neceſſarily conſequent upon them. I ſeem to want that evidence which I can beſt comprehend, and which gives perfect ſatisfaction to an inquiſitive mind; yet it is ridiculous to doubt, and I find it is not in my power. An attempt to throw off this belief, is like an attempt to fly, equally ridiculous and impracticable.

To a Philoſopher, who has been accuſtomed to think that the treaſure of his knowledge is the acquiſition of that reaſoning power of which he boaſts, it is no doubt humiliating to find, that his reaſon can lay no claim to the greater part of it.

By his reaſon, he can diſcover certain abſtract and neceſſary relations of things: But his knowledge of what really exiſts, or did exiſt, comes by another channel, which is open to thoſe who cannot reaſon. He is led to it in the dark, and knows not how he came by it.

CHAP XX. It is no wonder that the pride of philoſophy ſhould lead ſome to invent vain theories, in order to account for this knowledge; and others, who ſee this to be impracticable, to ſpurn at a knowledge they cannot account for, and vainly attempt to throw it off, as a reproach to their underſtanding. But the wiſe and the humble will receive it as the gift of Heaven, and endeavour to make the beſt uſe of it.

CHAP. XXI.

Of the Improvement of the Senſes.

OUR ſenſes may be conſidered in two views; *firſt*, As they afford us agreeable ſenſations, or ſubject us to ſuch as are diſagreeable; and, *ſecondly*, As they give us information of things that concern us.

In the *firſt* view, they neither require nor admit of improvement. Both the painful and the agreeable ſenſations of our external ſenſes are given by nature for certain ends; and they are given in that degree which is the moſt proper for their end. By diminiſhing or increaſing them, we ſhould not mend, but mar the work of Nature.

Bodily pains are indications of ſome diſorder or hurt of the body, and admonitions to uſe the beſt means in our power to prevent or remove their cauſes. As far as this can be done by temperance, exerciſe, regimen, or the ſkill of the phyſician, every man hath ſufficient inducement to do it.

When pain cannot be prevented or removed, it is greatly alleviated by patience and fortitude of mind. While the mind is ſuperior to pain, the man is not unhappy, though he may be exerciſed. It leaves no ſting behind it, but rather matter of triumph and

and agreeable reflection, when borne properly, and in a good cauſe. The Canadians have taught us, that even ſavages may acquire a ſuperiority to the moſt excruciating pains; and, in every region of the earth, inſtances will be found, where a ſenſe of duty, of honour, or even of worldly intereſt, have triumphed over it.

It is evident, that Nature intended for man, in his preſent ſtate, a life of labour and toil, wherein he may be occaſionally expoſed to pain and danger: And the happieſt man is not he who has felt leaſt of thoſe evils, but he whoſe mind is fitted to bear them by real magnanimity.

Our active and perceptive powers are improved and perfected by uſe and exerciſe. This is the conſtitution of Nature. But, with regard to the agreeable and diſagreeable ſenſations we have by our ſenſes, the very contrary is an eſtabliſhed conſtitution of Nature: The frequent repetition of them weakens their force. Senſations at firſt very diſagreeable, by uſe become tolerable, and at laſt perfectly indifferent. And thoſe that are at firſt very agreeable, by frequent repetition become inſipid, and at laſt perhaps give diſguſt. Nature has ſet limits to the pleaſures of ſenſe, which we cannot paſs; and all ſtudied gratifications of them, as it is mean and unworthy of a man, ſo it is fooliſh and fruitleſs.

The man who, in eating and drinking, and in other gratifications of ſenſe, obeys the calls of Nature, without affecting delicacies and refinements, has all the enjoyment that the ſenſes can afford. If one could, by a ſoft and luxurious life, acquire a more delicate ſenſibility to pleaſure, it muſt be at the expence of a like ſenſibility to pain, from which he can never promiſe exemption; and at the expence of cheriſhing many diſeaſes which produce pain.

The improvement of our external ſenſes, as they are the means of giving us information, is a ſubject more worthy of our attention: For although they are not the nobleſt and moſt exalted powers

CHAP. XXI. powers of our nature, yet they are not the leaſt uſeful. All that we know or can know of the material world, muſt be grounded upon their information; and the Philoſopher, as well as the day-labourer, muſt be indebted to them for the largeſt part of his knowledge.

Some of our perceptions by the ſenſes may be called original, becauſe they require no previous experience or learning; but the far greateſt part is acquired, and the fruit of experience.

Three of our ſenſes, to wit, ſmell, taſte, and hearing, originally give us only certain ſenſations, and a conviction that theſe ſenſations are occaſioned by ſome external object. We give a name to that quality of the object by which it is fitted to produce ſuch a ſenſation, and connect that quality with the object, and with its other qualities.

Thus we learn, that a certain ſenſation of ſmell is produced by a roſe; and that quality in the roſe, by which it is fitted to produce this ſenſation, we call the ſmell of the roſe. Here it is evident that the ſenſation is original. The perception, that the roſe has that quality, which we call its ſmell, is acquired. In like manner, we learn all thoſe qualities in bodies, which we call their ſmell, their taſte, their ſound. Theſe are all ſecondary qualities, and we give the ſame name to them which we give to the ſenſations they produce; not from any ſimilitude between the ſenſation and the quality of the ſame name, but becauſe the quality is ſignified to us by the ſenſation as its ſign, and becauſe our ſenſes give us no other knowledge of the quality, but that it is fit to produce ſuch a ſenſation.

By the other two ſenſes, we have much more ample information. By ſight, we learn to diſtinguiſh objects by their colour, in the ſame manner as by their ſound, taſte, and ſmell. By this ſenſe, we perceive viſible objects to have extenſion in two dimenſions, to have

have viſible figure and magnitude, and a certain angular diſtance from one another. Theſe I conceive are the original perceptions of ſight. CHAP. XXI

By touch, we not only perceive the temperature of bodies as to heat and cold, which are ſecondary qualities, but we perceive originally their three dimenſions, their tangible figure and magnitude, their linear diſtance from one another, their hardneſs, ſoftneſs, or fluidity. Theſe qualities we originally perceive by touch only; but, by experience, we learn to perceive all or moſt of them by ſight.

We learn to perceive, by one ſenſe, what originally could have been perceived only by another, by finding a connection between the objects of the different ſenſes. Hence the original perceptions, or the ſenſations of one ſenſe become ſigns of whatever has always been found connected with them; and from the ſign the mind paſſes immediately to the conception and belief of the thing ſignified: And although the connection in the mind between the ſign, and the thing ſignified by it, be the effect of cuſtom, this cuſtom becomes a ſecond nature, and it is difficult to diſtinguiſh it from the original power of perception.

Thus, if a ſphere of one uniform colour be ſet before me, I perceive evidently by my eye its ſpherical figure, and its three dimenſions. All the world will acknowledge, that by ſight only, without touching it, I may be certain that it is a ſphere; yet it is no leſs certain, that, by the original power of ſight, I could not perceive it to be a ſphere, and to have three dimenſions. The eye originally could only perceive two dimenſions, and a gradual variation of colour on the different ſides of the object.

It is experience that teaches me that the variation of colour is an effect of ſpherical convexity, and of the diſtribution of light and ſhade. But ſo rapid is the progreſs of the thought, from the effect

CHAP. XXI. to the cauſe, that we attend only to the laſt, and can hardly be perſuaded that we do not immediately ſee the three dimenſions of the ſphere.

Nay, it may be obſerved, that, in this caſe, the acquired perception in a manner effaces the original one; for the ſphere is ſeen to be of one uniform colour, though originally there would have appeared a gradual variation of colour: But that apparent variation, we learn to interpret as the effect of light and ſhade falling upon a ſphere of one uniform colour.

A ſphere may be painted upon a plane, ſo exactly, as to be taken for a real ſphere, when the eye is at a proper diſtance, and in the proper point of view. We ſay in this caſe, that the eye is deceived, that the appearance is fallacious: But there is no fallacy in the original perception, but only in that which is acquired by cuſtom. The variation of colour, exhibited to the eye by the painter's art, is the ſame which Nature exhibits by the different degrees of light falling upon the convex ſurface of a ſphere.

In perception, whether original or acquired, there is ſomething which may be called the ſign, and ſomething which is ſignified to us, or brought to our knowledge by that ſign.

In original perception, the ſigns are the various ſenſations which are produced by the impreſſions made upon our organs. The things ſignified, are the objects perceived in conſequence of thoſe ſenſations, by the original conſtitution of our nature.

Thus, when I graſp an ivory ball in my hand, I have a certain ſenſation of touch. Although this ſenſation be in the mind, and have no ſimilitude to any thing material, yet, by the laws of my conſtitution, it is immediately followed by the conception and belief, that there is in my hand a hard ſmooth body of a ſpherical figure, and about an inch and a half in diameter. This belief

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is grounded neither upon reaſoning, nor upon experience; it is the immediate effect of my conſtitution, and this I call original perception. CHAP. XXI.

In acquired perception, the ſign may be either a ſenſation, or ſomething originally perceived. The thing ſignified, is ſomething, which, by experience, has been found connected with that ſign.

Thus, when the ivory ball is placed before my eye, I perceive by ſight what I before perceived by touch, that the ball is ſmooth, ſpherical, of ſuch a diameter, and at ſuch a diſtance from the eye; and to this is added the perception of its colour. All theſe things I perceive by ſight diſtinctly, and with certainty: Yet it is certain from principles of philoſophy, that if I had not been accuſtomed to compare the informations of ſight with thoſe of touch, I ſhould not have perceived theſe things by ſight. I ſhould have perceived a circular object, having its colour gradually more faint towards the ſhaded ſide. But I ſhould not have perceived it to have three dimenſions, to be ſpherical, to be of ſuch a linear magnitude, and at ſuch a diſtance from the eye. That theſe laſt mentioned are not original perceptions of ſight, but acquired by experience, is ſufficiently evident from the principles of optics, and from the art of painters, in painting objects of three dimenſions, upon a plane which has only two. And it has been put beyond all doubt, by obſervations recorded of ſeveral perſons, who having, by cataracts in their eyes, been deprived of ſight from their infancy, have been couched and made to ſee, after they came to years of underſtanding.

Thoſe who have had their eyeſight from infancy, acquire ſuch perceptions ſo early, that they cannot recollect the time when they had them not, and therefore make no diſtinction between them and their original perceptions; nor can they be eaſily perſuaded, that there is any juſt foundation for ſuch a diſtinction. In all languages men ſpeak with equal aſſurance of their ſeeing objects to

CHAP. XXI. be ſpherical or cubical, as of their feeling them to be ſo; nor do they ever dream, that theſe perceptions of ſight were not as early and original as the perceptions they have of the ſame objects by touch.

This power which we acquire of perceiving things by our ſenſes, which originally we ſhould not have perceived, is not the effect of any reaſoning on our part: It is the reſult of our conſtitution, and of the ſituations in which we happen to be placed.

We are ſo made, that when two things are found to be conjoined in certain circumſtances, we are prone to believe that they are connected by nature, and will always be found together in like circumſtances. The belief which we are led into in ſuch caſes is not the effect of reaſoning, nor does it ariſe from intuitive evidence in the thing believed; it is, as I apprehend, the immediate effect of our conſtitution: Accordingly it is ſtrongeſt in infancy, before our reaſoning power appears, before we are capable of drawing a concluſion from premiſes. A child who has once burnt his finger in a candle, from that ſingle inſtance connects the pain of burning with putting his finger in the candle, and believes that theſe two things muſt go together. It is obvious, that this part of our conſtitution is of very great uſe before we come to the uſe of reaſon, and guards us from a thouſand miſchiefs, which, without it, we would ruſh into; it may ſometimes lead us into error, but the good effects of it far overbalance the ill.

It is, no doubt, the perfection of a rational being to have no belief but what is grounded on intuitive evidence, or on juſt reaſoning: But man, I apprehend, is not ſuch a being; nor is it the intention of Nature that he ſhould be ſuch a being, in every period of his exiſtence. We come into the world without the exerciſe of reaſon; we are merely animal before we are rational creatures; and it is neceſſary for our preſervation, that we ſhould believe many things before we can reaſon. How then is our belief to be regulated

lated before we have reaſon to regulate it? has Nature left it to be regulated by chance? By no means. It is regulated by certain principles, which are parts of our conſtitution; whether they ought to be called animal principles, or inſtinctive principles, or what name we give to them, is of ſmall moment; but they are certainly different from the faculty of reaſon: They do the office of reaſon while it is in its infancy, and muſt as it were be carried in a nurſe's arms, and they are leading ſtrings to it in its gradual progreſs.

From what has been ſaid, I think it appears, that our original powers of perceiving objects by our ſenſes receive great improvement by uſe and habit; and without this improvement, would be altogether inſufficient for the purpoſes of life. The daily occurrences of life not only add to our ſtock of knowledge, but give additional perceptive powers to our ſenſes; and time gives us the uſe of our eyes and ears, as well as of our hands and legs.

This is the greateſt and moſt important improvement of our external ſenſes. It is to be found in all men come to years of underſtanding, but is various in different perſons according to their different occupations, and the different circumſtances in which they are placed. Every artiſt acquires an eye as well as a hand in his own profeſſion: His eye becomes ſkilled in perceiving, no leſs than his hand in executing, what belongs to his employment.

Beſides this improvement of our ſenſes which nature produces without our intention, there are various ways in which they may be improved, or their defects remedied by art. As, *firſt*, by a due care of the organs of ſenſe that they be in a ſound and natural ſtate. This belongs to the department of the Medical Faculty.

Secondly, By accurate attention to the objects of ſenſe. The effects of ſuch attention in improving our ſenſes appear in every art. The artiſt by giving more attention to certain objects than others do, by that means perceives many things in thoſe objects which

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CHAP. XXI. others do not. Thoſe who happen to be deprived of one ſenſe, frequently ſupply that defect in a great degree, by giving more accurate attention to the objects of the ſenſes they have. The blind have often been known to acquire uncommon acuteneſs in diſtinguiſhing things by feeling and hearing; and the deaf are uncommonly quick in reading mens thoughts in their countenance.

A *third* way in which our ſenſes admit of improvement, is, by additional organs or inſtruments contrived by art. By the invention of optical glaſſes, and the gradual improvement of them, the natural power of viſion is wonderfully improved, and a vaſt addition made to the ſtock of knowledge which we acquire by the eye. By ſpeaking trumpets, and ear trumpets, ſome improvement has been made in the ſenſe of hearing. Whether by ſimilar inventions the other ſenſes may be improved, ſeems uncertain.

A *fourth* method by which the information got by our ſenſes may be improved, is, by diſcovering the connection which Nature hath eſtabliſhed between the ſenſible qualities of objects and their more latent qualities.

By the ſenſible qualities of bodies, I underſtand thoſe that are perceived immediately by the ſenſes, ſuch as their colour, figure, feeling, ſound, taſte, ſmell. The various modifications, and various combinations of theſe, are innumerable; ſo that there are hardly two individual bodies in Nature that may not be diſtinguiſhed by their ſenſible qualities.

The latent qualities are ſuch as are not immediately diſcovered by our ſenſes; but diſcovered, ſometimes by accident, ſometimes by experiment or obſervation. The moſt important part of our knowledge of bodies, is the knowledge of the latent qualities of the ſeveral ſpecies, by which they are adapted to certain purpoſes, either for food, or medicine, or agriculture, or for the materials or utenſils of ſome art or manufacture.

I am taught, that certain ſpecies of bodies have certain latent qualities; but how ſhall I know that this individual is of ſuch a ſpecies? This muſt be known by the ſenſible qualities which characteriſe the ſpecies. I muſt know that this is bread, and that wine, before I eat the one or drink the other. I muſt know that this is rhubarb, and that opium, before I uſe the one or the other for medicine.

It is one branch of human knowledge to know the names of the various ſpecies of natural and artificial bodies, and to know the ſenſible qualities by which they are aſcertained to be of ſuch a ſpecies, and by which they are diſtinguiſhed from one another. It is another branch of knowledge to know the latent qualities of the ſeveral ſpecies, and the uſes to which they are ſubſervient.

The man who poſſeſſes both theſe branches, is informed by his ſenſes of innumerable things of real moment, which are hid from thoſe who poſſeſs only one, or neither. This is an improvement in the information got by our ſenſes, which muſt keep pace with the improvements made in natural hiſtory, in natural philoſophy, and in the arts.

It would be an improvement ſtill higher, if we were able to diſcover any connection between the ſenſible qualities of bodies and their latent qualities, without knowing the ſpecies, or what may have been diſcovered with regard to it.

Some Philoſophers of the firſt rate have made attempts towards this noble improvement, not without promiſing hopes of ſucceſs. Thus the celebrated LINNÆUS has attempted to point out certain ſenſible qualities by which a plant may very probably be concluded to be poiſonous, without knowing its name or ſpecies. He has given ſeveral other inſtances, wherein certain medical and œconomical virtues of plants are indicated by their external appearances. Sir ISAAC NEWTON hath attempted to ſhow, that from

CHAP. XXI. from the colours of bodies we may form a probable conjecture of the ſize of their conſtituent parts, by which the rays of light are reflected.

No man can pretend to ſet limits to the diſcoveries that may be made by human genius and induſtry, of ſuch connections between the latent and the ſenſible qualities of bodies. A wide field here opens to our view, whoſe boundaries no man can aſcertain, of improvements that may hereafter be made in the information conveyed to us by our ſenſes.

CHAP. XXII.

Of the Fallacy of the Senſes.

COMPLAINTS of the fallacy of the ſenſes have been very common in ancient and in modern times, eſpecially among the Philoſophers: And if we ſhould take for granted all that they have ſaid on this ſubject, the natural concluſion from it might ſeem to be, that the ſenſes are given to us by ſome malignant Dæmon on purpoſe to delude us, rather than that they are formed by the wiſe and beneficent Author of Nature, to give us true information of things neceſſary to our preſervation and happineſs.

The whole ſect of Atomiſts among the ancients, led by DEMOCRITUS, and afterwards by EPICURUS maintained, that all the qualities of bodies which the moderns call ſecondary qualities, to wit, ſmell, taſte, ſound, colour, heat and cold, are mere illuſions of ſenſe, and have no real exiſtence. PLATO maintained that we can attain no real knowledge of material things; and that eternal and immutable ideas are the only objects of real knowledge. The Academics and Sceptics anxiouſly ſought for arguments to prove the fallaciouſneſs of our ſenſes, in order to ſupport their favourite

vourite doctrine, that even in things that ſeem moſt evident, we ought to with-hold aſſent. CHAP. XXII.

Among the Peripatetics we find frequent complaints that the ſenſes often deceive us, and that their teſtimony is to be ſuſpected, when it is not confirmed by reaſon, by which the errors of ſenſe may be corrected. This complaint they ſupported by many common-place inſtances; ſuch as, the crooked appearance of an oar in water; objects being magnified, and their diſtance miſtaken in a fog; the ſun and moon appearing about a foot or two in diameter, while they are really thouſands of miles; a ſquare tower being taken at a diſtance to be round. Theſe, and many ſimilar appearances, they thought to be ſufficiently accounted for from the fallacy of the ſenſes: And thus the fallacy of the ſenſes was uſed as a decent cover to conceal their ignorance of the real cauſes of ſuch phænomena, and ſerved the ſame purpoſe as their occult qualities and ſubſtantial forms.

Des Cartes and his followers joined in the ſame complaint. Antony le Grand, a Philoſopher of that ſect, in the firſt chapter of his Logic, expreſſes the ſentiments of the ſect as follows: "Since all our ſenſes are fallacious, and we are frequently deceived by them, common reaſon adviſes, that we ſhould not put too much truſt in them, nay, that we ſhould ſuſpect falſehood in every thing they repreſent; for it is imprudence and temerity to truſt to thoſe who have but once deceived us; and if they err at any time, they may be believed always to err. They are given by Nature for this purpoſe only, to warn us of what is uſeful and what is hurtful to us. The order of Nature is perverted when we put them to any other uſe, and apply them for the knowledge of truth."

When we conſider, that the active part of mankind, in all ages from the beginning of the world, have reſted their moſt important concerns upon the teſtimony of ſenſe, it will be very difficult to

CHAP. XXII. reconcile their conduct with the ſpeculative opinion ſo generally entertained of the fallaciouſneſs of the ſenſes. And it ſeems to be a very unfavourable account of the workmanſhip of the Supreme Being, to think that he has given us one faculty to deceive us, to wit, our ſenſes, and another faculty, to wit, our reaſon, to detect the fallacy.

It deſerves, therefore, to be conſidered, whether the fallaciouſneſs of our ſenſes be not a common error, which men have been led into, from a deſire to conceal their ignorance, or to apologiſe for their miſtakes.

There are two powers which we owe to our external ſenſes, ſenſation, and the perception of external objects.

It is impoſſible that there can be any fallacy in ſenſation: For we are conſcious of all our ſenſations, and they can neither be any other in their nature, nor greater or leſs in their degree than we feel them. It is impoſſible that a man ſhould be in pain, when he does not feel pain; and when he feels pain, it is impoſſible that his pain ſhould not be real, and in its degree what it is felt to be; and the ſame thing may be ſaid of every ſenſation whatſoever. An agreeable or an uneaſy ſenſation may be forgot when it is paſt, but when it is preſent, it can be nothing but what we feel.

If, therefore, there be any fallacy in our ſenſes, it muſt be in the perception of external objects, which we ſhall next conſider.

And here I grant that we can conceive powers of perceiving external objects more perfect than ours, which, poſſibly, beings of a higher order may enjoy. We can perceive external objects only by means of bodily organs; and theſe are liable to various diſorders, which ſometimes affect our powers of perception. The nerves and brain, which are interior organs of perception, are likewiſe liable to diſorders, as every part of the human frame is.

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The imagination, the memory, the judging and reaſoning powers, are all liable to be hurt, or even deſtroyed, by diſorders of the body, as well as our powers of perception; but we do not on this account call them fallacious.

Our ſenſes, our memory, and our reaſon, are all limited and imperfect: This is the lot of humanity: But they are ſuch as the Author of our being ſaw to be beſt fitted for us in our preſent ſtate. Superior natures may have intellectual powers which we have not, or ſuch as we have, in a more perfect degree, and leſs liable to accidental diſorders: But we have no reaſon to think that God has given fallacious powers to any of his creatures: This would be to think diſhonourably of our Maker, and would lay a foundation for univerſal ſcepticiſm.

The appearances commonly imputed to the fallacy of the ſenſes are many, and of different kinds; but I think they may be reduced to the four following claſſes.

Firſt, Many things called deceptions of the ſenſes are only concluſions raſhly drawn from the teſtimony of the ſenſes. In theſe caſes the teſtimony of the ſenſes is true, but we raſhly draw a concluſion from it, which does not neceſſarily follow. We are diſpoſed to impute our errors rather to falſe information than to inconcluſive reaſoning, and to blame our ſenſes for the wrong concluſions we draw from their teſtimony.

Thus, when a man has taken a counterfeit guinea for a true one, he ſays his ſenſes deceived him; but he lays the blame where it ought not to be laid: For we may aſk him, Did your ſenſes give a falſe teſtimony of the colour, or of the figure, or of the impreſſion? No. But this is all that they teſtified, and this they teſtified truly: From theſe premiſes you concluded that it was a true guinea, but this concluſion does not follow; you erred therefore, not by relying upon the teſtimony of ſenſe, but by judging raſhly from

CHAP. XXII.

its teſtimony: Not only are your ſenſes innocent of this error, but it is only by their information that it can be diſcovered. If you conſult them properly, they will inform you that what you took for a guinea is baſe metal, or is deficient in weight, and this can only be known by the teſtimony of ſenſe.

I remember to have met with a man who thought the argument uſed by Proteſtants againſt the Popiſh doctrine of tranſubſtantiation, from the teſtimony of our ſenſes, inconcluſive; becauſe, ſaid he, inſtances may be given where ſeveral of our ſenſes may deceive us: How do we know then that there may not be caſes wherein they all deceive us, and no ſenſe is left to detect the fallacy? I begged of him to know an inſtance wherein ſeveral of our ſenſes deceive us. I take, ſaid he, a piece of ſoft turf, I cut it into the ſhape of an apple; with the eſſence of apples, I give it the ſmell of an apple; and with paint, I can give it the ſkin and colour of an apple. Here then is a body, which, if you judge by your eye, by your touch, or by your ſmell, is an apple.

To this I would anſwer, that no one of our ſenſes deceives us in this caſe. My ſight and touch teſtify that it has the ſhape and colour of an apple: This is true. The ſenſe of ſmelling teſtifies that it has the ſmell of an apple: This is likewiſe true, and is no deception. Where then lies the deception? It is evident it lies in this, that becauſe this body has ſome qualities belonging to an apple, I conclude that it is an apple. This is a fallacy, not of the ſenſes, but of inconcluſive reaſoning.

Many falſe judgments that are accounted deceptions of ſenſe, ariſe from our miſtaking relative motion for real or abſolute motion. Theſe can be no deceptions of ſenſe, becauſe by our ſenſes we perceive only the relative motions of bodies; and it is by reaſoning that we infer the real from the relative which we perceive. A little reflection may ſatisfy us of this.

It was before obſerved, that we perceive extenſion to be one ſenſible quality of bodies, and thence are neceſſarily led to conceive ſpace, though ſpace be of itſelf no object of ſenſe. When a body is removed out of its place, the ſpace which it filled remains empty till it is filled by ſome other body, and would remain if it ſhould never be filled. Before any body exiſted, the ſpace which bodies now occupy was empty ſpace, capable of receiving bodies; for no body can exiſt where there is no ſpace to contain it. There is ſpace therefore wherever bodies exiſt, or can exiſt.

Hence it is evident that ſpace can have no limits. It is no leſs evident that it is immoveable. Bodies placed in it are moveable, but the place where they were cannot be moved; and we can as eaſily conceive a thing to be moved from itſelf, as one part of ſpace brought nearer to, or removed farther from another.

This ſpace therefore which is unlimited and immoveable, is called by Philoſophers *abſolute ſpace*. Abſolute or real motion is a change of place in abſolute ſpace.

Our ſenſes do not teſtify the abſolute motion or abſolute reſt of any body. When one body removes from another, this may be diſcerned by the ſenſes; but whether any body keeps the ſame part of abſolute ſpace, we do not perceive by our ſenſes: When one body ſeems to remove from another, we can infer with certainty that there is abſolute motion, but whether in the one or the other, or partly in both, is not diſcerned by ſenſe.

Of all the prejudices which philoſophy contradicts, I believe there is none ſo general as that the earth keeps its place unmoved. This opinion ſeems to be univerſal, till it is corrected by inſtruction, or by philoſophical ſpeculation. Thoſe who have any tincture of education are not now in danger of being held by it, but they find at firſt a reluctance to believe that there are antipodes; that the earth is ſpherical, and turns round its axis every day, and round

CHAP. XXII. round the ſun every year: They can recollect the time when reaſon ſtruggled with prejudice upon theſe points, and prevailed at length, but not without ſome effort.

The cauſe of a prejudice ſo very general is not unworthy of inveſtigation. But that is not our preſent buſineſs. It is ſufficient to obſerve, that it cannot juſtly be called a fallacy of ſenſe; becauſe our ſenſes teſtify only the change of ſituation of one body in relation to other bodies, and not its change of ſituation in abſolute ſpace. It is only the relative motion of bodies that we perceive, and that, we perceive truly. It is the province of reaſon and philoſophy, from the relative motions which we perceive, to collect the real and abſolute motions which produce them.

All motion muſt be eſtimated from ſome point or place which is ſuppoſed to be at reſt. We perceive not the points of abſolute ſpace, from which real and abſolute motion muſt be reckoned: And there are obvious reaſons that lead mankind in the ſtate of ignorance, to make the earth the fixed place from which they may eſtimate the various motions they perceive. The cuſtom of doing this from infancy, and of uſing conſtantly a language which ſuppoſes the earth to be at reſt, may perhaps be the cauſe of the general prejudice in favour of this opinion.

Thus it appears, that if we diſtinguiſh accurately between what our ſenſes really and naturally teſtify, and the concluſions which we draw from their teſtimony by reaſoning, we ſhall find many of the errors, called fallacies of the ſenſes, to be no fallacy of the ſenſes, but raſh judgments, which are not to be imputed to our ſenſes.

Secondly, Another claſs of errors imputed to the fallacy of the ſenſes, are thoſe which we are liable to in our acquired perceptions. Acquired perception is not properly the teſtimony of thoſe ſenſes which God hath given us, but a concluſion drawn from what the ſenſes

ſenſes teſtify. In our paſt experience, we have found certain things conjoined with what our ſenſes teſtify. We are led by our conſtitution to expect this conjunction in time to come; and when we have often found it in our experience to happen, we acquire a firm belief, that the things which we have found thus conjoined are connected in nature, and that one is a ſign of the other. The appearance of the ſign immediately produces the belief of its uſual attendant, and we think we perceive the one as well as the other.

That ſuch concluſions are formed even in infancy, no man can doubt; nor is it leſs certain that they are confounded with the natural and immediate perceptions of ſenſe, and in all languages are called by the ſame name. We are therefore authoriſed by language to call them perception, and muſt often do ſo, or ſpeak unintelligibly. But philoſophy teaches us in this, as in many other inſtances, to diſtinguiſh things which the vulgar confound. I have therefore given the name of acquired perception to ſuch concluſions, to diſtinguiſh them from what is naturally, originally, and immediately teſtified by our ſenſes. Whether this acquired perception is to be reſolved into ſome proceſs of reaſoning, of which we have loſt the remembrance, as ſome Philoſophers think, or whether it reſults from ſome part of our conſtitution diſtinct from reaſon, as I rather believe, does not concern the preſent ſubject. If the firſt of theſe opinions be true, the errors of acquired perception will fall under the firſt claſs before mentioned. If not, it makes a diſtinct claſs by itſelf. But whether the one or the other be true, it muſt be obſerved, that the errors of acquired perception are not properly fallacies of our ſenſes.

Thus when a globe is ſet before me, I perceive by my eyes that it has three dimenſions and a ſpherical figure. To ſay that this is not perception, would be to reject the authority of cuſtom in the uſe of words, which no wiſe man will do: But that it is not the teſtimony of my ſenſe of ſeeing, every Philoſopher knows. I ſee only a circular form, having the light and colour diſtributed in a certain

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certain way over it. But being accuſtomed to obſerve this diſtribution of light and colour only in a ſpherical body; I immediately, from what I ſee, believe the object to be ſpherical, and ſay that I ſee or perceive it to be ſpherical. When a painter, by an exact imitation of that diſtribution of light and colour, which I have been accuſtomed to ſee only in a real ſphere, deceives me, ſo as to make me take that to be a real ſphere, which is only a painted one, the teſtimony of my eye is true; the colour and viſible figure of the object is truly what I ſee it to be: The error lies in the concluſion drawn from what I ſee, to wit, that the object has three dimenſions and a ſpherical figure. The concluſion is falſe in this caſe; but whatever be the origin of this concluſion, it is not properly the teſtimony of ſenſe.

To this claſs we muſt refer the judgments we are apt to form of the diſtance and magnitude of the heavenly bodies, and of terreſtrial objects ſeen on high. The miſtakes we make of the magnitude and diſtance of objects ſeen through optical glaſſes, or through an atmoſphere uncommonly clear, or uncommonly foggy, belong likewiſe to this claſs.

The errors we are led into in acquired perception are very rarely hurtful to us in the conduct of life; they are gradually corrected by a more enlarged experience, and a more perfect knowledge of the laws of Nature: And the general laws of our conſtitution, by which we are ſometimes led into them, are of the greateſt utility.

We come into the world ignorant of every thing, and by our ignorance expoſed to many dangers and to many miſtakes. The regular train of cauſes and effects, which Divine Wiſdom has eſtabliſhed, and which directs every ſtep of our conduct in advanced life, is unknown, until it is gradually diſcovered by experience.

We muſt learn much from experience before we can reaſon, and therefore

therefore muſt be liable to many errors. Indeed, I apprehend, that, in the firſt part of life, reaſon would do us much more hurt than good. Were we ſenſible of our condition in that period, and capable of reflecting upon it, we ſhould be like a man in the dark, ſurrounded with dangers, where every ſtep he takes may be into a pit. Reaſon would direct him to ſit down, and wait till he could ſee about him.

In like manner, if we ſuppoſe an infant endowed with reaſon, it would direct him to do nothing, till he knew what could be done with ſafety. This he can only know by experiment, and experiments are dangerous. Reaſon directs, that experiments that are full of danger ſhould not be made without a very urgent cauſe. It would therefore make the infant unhappy, and hinder his improvement by experience.

Nature has followed another plan. The child, unapprehenſive of danger, is led by inſtinct to exert all his active powers, to try every thing without the cautious admonitions of reaſon, and to believe every thing that is told him. Sometimes he ſuffers by his raſhneſs what reaſon would have prevented: But his ſuffering proves a ſalutary diſcipline, and makes him for the future avoid the cauſe of it. Sometimes he is impoſed upon by his credulity; but it is of infinite benefit to him upon the whole. His activity and credulity are more uſeful qualities, and better inſtructors than reaſon would be; they teach him more in a day than reaſon would do in a year; they furniſh a ſtock of materials for reaſon to work upon; they make him eaſy and happy in a period of his exiſtence, when reaſon could only ſerve to ſuggeſt a thouſand tormenting anxieties and fears: And he acts agreeably to the conſtitution and intention of Nature, even when he does and believes what reaſon would not juſtify. So that the wiſdom and goodneſs of the Author of Nature is no leſs conſpicuous in with-holding the exerciſe of our reaſon in this period, than in beſtowing it when we are ripe for it.

CHAP. XXII. A third claſs of errors, aſcribed to the fallacy of the ſenſes, proceeds from ignorance of the laws of Nature.

The laws of Nature (I mean not moral but phyſical laws) are learned, either from our own experience, or the experience of others, who have had occaſion to obſerve the courſe of Nature.

Ignorance of thoſe laws, or inattention to them, is apt to occaſion falſe judgments with regard to the objects of ſenſe, eſpecially thoſe of hearing and of ſight; which falſe judgments are often, without good reaſon, called fallacies of ſenſe.

Sounds affect the ear differently, according as the ſounding body is before or behind us, on the right hand or on the left, near or at a great diſtance. We learn, by the manner in which the ſound affects the ear, on what hand we are to look for the ſounding body; and in moſt caſes we judge right. But we are ſometimes deceived by echos, or by whiſpering galleries, or ſpeaking trumpets, which return the ſound, or alter its direction, or convey it to a diſtance without diminution.

The deception is ſtill greater, becauſe more uncommon, which is ſaid to be produced by Gaſtriloquiſts, that is, perſons who have acquired the art of modifying their voice, ſo that it ſhall affect the ear of the hearers, as if it came from another perſon, or from the clouds, or from under the earth.

I never had the fortune to be acquainted with any of theſe artiſts, and therefore cannot ſay to what degree of perfection the art may have been carried.

I apprehend it to be only ſuch an imperfect imitation as may deceive thoſe who are inattentive, or under a panic. For if it could be carried to perfection, a Gaſtriloquiſt would be as dangerous a man in ſociety as was the ſhepherd GIGES, who, by turning

a ring upon his finger, could make himſelf inviſible, and by that means, from being the King's ſhepherd, became King of Lydia. CHAP. XXII.

If the Gaſtriloquiſts have all been too good men to uſe their talent to the detriment of others, it might at leaſt be expected that ſome of them ſhould apply it to their own advantage. If it could be brought to any conſiderable degree of perfection, it ſeems to be as proper an engine for drawing money by the exhibition of it, as legerdemain or rope-dancing. But I have never heard of any exhibition of this kind, and therefore am apt to think that it is too coarſe an imitation to bear exhibition even to the vulgar.

Some are ſaid to have the art of imitating the voice of another ſo exactly, that in the dark they might be taken for the perſon whoſe voice they imitate. I am apt to think, that this art alſo, in the relations made of it, is magnified beyond the truth, as wonderful relations are apt to be, and that an attentive ear would be able to diſtinguiſh the copy from the original.

It is indeed a wonderful inſtance of the accuracy as well as of the truth of our ſenſes, in things that are of real uſe in life, that we are able to diſtinguiſh all our acquaintance by their countenance, by their voice, and by their hand-writing, when at the ſame time we are often unable to ſay by what minute difference the diſtinction is made; and that we are ſo very rarely deceived in matters of this kind, when we give proper attention to the informations of ſenſe.

However, if any caſe ſhould happen, in which ſounds produced by different cauſes are not diſtinguiſhable by the ear, this may prove that our ſenſes are imperfect, but not that they are fallacious. The ear may not be able to draw the juſt concluſion, but it is only our ignorance of the laws of ſound that leads us to a wrong concluſion.

CHAP. XXII. Deceptions of ſight, ariſing from ignorance of the laws of Nature, are more numerous, and more remarkable than thoſe of hearing.

The rays of light, which are the means of ſeeing, paſs in right lines from the object to the eye, when they meet with no obſtruction; and we are by Nature led to conceive the viſible object to be in the direction of the rays that come to the eye. But the rays may be reflected, refracted, or inflected in their paſſage from the object to the eye, according to certain fixed laws of Nature, by which means their direction may be changed, and conſequently the apparent place, figure, or magnitude of the object.

Thus a child ſeeing himſelf in a mirror, thinks he ſees another child behind the mirror, that imitates all his motions. But even a child ſoon gets the better of this deception, and knows that he ſees himſelf only.

All the deceptions made by teleſcopes, microſcopes, camera obſcuras, magic lanthorns, are of the ſame kind, though not ſo familiar to the vulgar. The ignorant may be deceived by them; but to thoſe who are acquainted with the principles of optics, they give juſt and true information, and the laws of Nature by which they are produced are of infinite benefit to mankind.

There remains another claſs of errors, commonly called deceptions of ſenſe, and the only one, as I apprehend, to which that name can be given with propriety: I mean ſuch as proceed from ſome diſorder or preternatural ſtate, either of the external organ, or of the nerves and brain, which are internal organs of perception.

In a delirium, or in madneſs, perception, memory, imagination, and our reaſoning powers, are ſtrangely diſordered and confounded. There are likewiſe diſorders which affect ſome of our ſenſes, while others are ſound. Thus, a man may feel pain in his toes after the leg is cut off. He may feel a little ball double by croſſing

ſing his fingers. He may ſee an object double, by not directing both eyes properly to it. By preſſing the ball of his eye, he may ſee colours that are not real. By the jaundice in his eyes, he may miſtake colours. Theſe are more properly deceptions of ſenſe than any of the claſſes before mentioned.

We muſt acknowledge it to be the lot of human nature, that all the human faculties are liable, by accidental cauſes, to be hurt and unfitted for their natural functions, either wholly or in part: But as this imperfection is common to them all, it gives no juſt ground for accounting any of them fallacious.

Upon the whole, it ſeems to have been a common error of Philoſophers to account the ſenſes fallacious. And to this error they have added another, that one uſe of reaſon is to detect the fallacies of ſenſe.

It appears, I think, from what has been ſaid, that there is no more reaſon to account our ſenſes fallacious, than our reaſon, our memory, or any other faculty of judging which Nature hath given us. They are all limited and imperfect; but wiſely ſuited to the preſent condition of man. We are liable to error and wrong judgment in the uſe of them all; but as little in the informations of ſenſe as in the deductions of reaſoning. And the errors we fall into with regard to objects of ſenſe are not corrected by reaſon, but by more accurate attention to the informations we may receive by our ſenſes themſelves.

Perhaps the pride of Philoſophers may have given occaſion to this error. Reaſon is the faculty wherein they aſſume a ſuperiority to the unlearned. The informations of ſenſe are common to the Philoſopher and to the moſt illiterate: They put all men upon a level; and therefore are apt to be undervalued. We muſt, however, be beholden to the informations of ſenſe for the greateſt and moſt intereſting part of our knowledge. The wiſdom of Nature has

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has made the moſt uſeful things moſt common, and they ought not to be deſpiſed on that account. Nature likewiſe forces our belief in thoſe informations, and all the attempts of philoſophy to weaken it are fruitleſs and vain.

I add only one obſervation to what has been ſaid upon this ſubject. It is, that there ſeems to be a contradiction between what Philoſophers teach concerning ideas, and their doctrine of the fallaciouſneſs of the ſenſes. We are taught that the office of the ſenſes is only to give us the ideas of external objects. If this be ſo, there can be no fallacy in the ſenſes. Ideas can neither be true nor falſe. If the ſenſes teſtify nothing, they cannot give falſe teſtimony. If they are not judging faculties, no judgment can be imputed to them, whether falſe or true. There is, therefore, a contradiction between the common doctrine concerning ideas and that of the fallaciouſneſs of the ſenſes. Both may be falſe, as I believe they are, but both cannot be true.

ESSAY

ESSAY III.

OF MEMORY.

CHAP. I.

Things obvious and certain with regard to Memory.

IN the gradual progreſs of man, from infancy to maturity, there is a certain order in which his faculties are unfolded, and this ſeems to be the beſt order we can follow in treating of them.

The external ſenſes appear firſt; memory ſoon follows, which we are now to conſider.

It is by memory that we have an immediate knowledge of things paſt: The ſenſes give us information of things only as they exiſt in the preſent moment; and this information, if it were not preſerved by memory, would vaniſh inſtantly, and leave us as ignorant as if it had never been.

Memory muſt have an object. Every man who remembers muſt remember ſomething, and that which he remembers is called the object of his remembrance. In this, memory agrees with perception, but differs from ſenſation, which has no object but the feeling itſelf.

Every man can diſtinguiſh the thing remembered from the remembrance of it. We may remember any thing which we have ſeen,

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ſeen, or heard, or known, or done, or ſuffered; but the remembrance of it is a particular act of the mind which now exiſts, and of which we are conſcious. To confound theſe two is an abſurdity, which a thinking man could not be led into, but by ſome falſe hypotheſis which hinders him from reflecting upon the thing which he would explain by it.

In memory we do not find ſuch a train of operations connected by our conſtitution as in perception. When we perceive an object by our ſenſes, there is, firſt, ſome impreſſion made by the object upon the organ of ſenſe, either immediately or by means of ſome medium. By this an impreſſion is made upon the nerves and brain, in conſequence of which we feel ſome ſenſation; and that ſenſation is attended by that conception and belief of the external object which we call perception. Theſe operations are ſo connected in our conſtitution, that it is difficult to disjoin them in our conceptions, and to attend to each without confounding it with the others. But in the operations of memory we are free from this embarraſſment; they are eaſily diſtinguiſhed from all other acts of the mind, and the names which denote them are free from all ambiguity.

The object of memory, or thing remembered, muſt be ſomething that is paſt; as the object of perception and of conſciouſneſs muſt be ſomething which is preſent: What now is, cannot be an object of memory; neither can that which is paſt and gone be an object of perception or of conſciouſneſs.

Memory is always accompanied with the belief of that which we remember, as perception is accompanied with the belief of that which we perceive, and conſciouſneſs with the belief of that whereof we are conſcious. Perhaps in infancy, or in a diſorder of mind, things remembered may be confounded with thoſe which are merely imagined; but in mature years, and in a ſound ſtate of mind, every man feels that he muſt believe what he diſtinctly remembers, though

though he can give no other reaſon of his belief, but that he remembers the thing diſtinctly; whereas, when he merely imagines a thing ever ſo diſtinctly, he has no belief of it upon that account.

This belief, which we have from diſtinct memory, we account real knowledge, no leſs certain than if it was grounded on demonſtration; no man in his wits calls it in queſtion, or will hear any argument againſt it. The teſtimony of witneſſes in cauſes of life and death depends upon it, and all the knowledge of mankind of paſt events is built on this foundation.

There are caſes in which a man's memory is leſs diſtinct and determinate, and where he is ready to allow that it may have failed him; but this does not in the leaſt weaken its credit, when it is perfectly diſtinct.

Memory implies a conception and belief of paſt duration; for it is impoſſible that a man ſhould remember a thing diſtinctly, without believing ſome interval of duration, more or leſs, to have paſſed between the time it happened, and the preſent moment; and I think it is impoſſible to ſhow how we could acquire a notion of duration if we had no memory.

Things remembered muſt be things formerly perceived or known. I remember the tranſit of Venus over the ſun in the year 1769. I muſt therefore have perceived it at the time it happened, otherwiſe I could not now remember it. Our firſt acquaintance with any object of thought cannot be by remembrance. Memory can only produce a continuance or renewal of a former acquaintance with the thing remembered.

The remembrance of a paſt event is neceſſarily accompanied with the conviction of our own exiſtence at the time the event happened. I cannot remember a thing that happened a year ago, without a conviction as ſtrong as memory can give, that I, the

CHAP. I. ſame identical perſon who now remember that event, did then exiſt.

What I have hitherto ſaid concerning memory, I conſider as principles which appear obvious and certain to every man who will take the pains to reflect upon the operations of his own mind. They are facts of which every man muſt judge by what he feels; and they admit of no other proof but an appeal to every man's own reflection. I ſhall therefore take them for granted in what follows, and ſhall firſt draw ſome concluſions from them, and then examine the theories of Philoſophers concerning memory, and concerning duration, and our perſonal identity, of which we acquire the knowledge by memory.

CHAP. II.

Memory an original Faculty.

FIRST, I think it appears that memory is an original faculty given us by the Author of our being, of which we can give no account, but that we are ſo made.

The knowledge which I have of things paſt by my memory, ſeems to me as unaccountable as an immediate knowledge would be of things to come; and I can give no reaſon why I ſhould have the one and not the other, but that ſuch is the will of my Maker. I find in my mind a diſtinct conception and a firm belief of a ſeries of paſt events; but how this is produced I know not. I call it memory, but this is only giving a name to it; it is not an account of its cauſe. I believe moſt firmly what I diſtinctly remember; but I can give no reaſon of this belief. It is the inſpiration of the Almighty that gives me this underſtanding.

When

When I believe the truth of a mathematical axiom, or of a mathematical propoſition, I ſee that it muſt be ſo: Every man who has the ſame conception of it ſees the ſame. There is a neceſſary and an evident connection between the ſubject and the predicate of the propoſition; and I have all the evidence to ſupport my belief which I can poſſibly conceive.

When I believe that I waſhed my hands and face this morning, there appears no neceſſity in the truth of this propoſition. It might be, or it might not be. A man may diſtinctly conceive it without believing it at all. How then do I come to believe it? I remember it diſtinctly. This is all I can ſay. This remembrance is an act of my mind. Is it impoſſible that this act ſhould be, if the event had not happened? I confeſs I do not ſee any neceſſary connection between the one and the other. If any man can ſhow ſuch a neceſſary connection, then I think that belief which we have of what we remember will be fairly accounted for; but if this cannot be done, that belief is unaccountable, and we can ſay no more but that it is the reſult of our conſtitution.

Perhaps it may be ſaid, that the experience we have had of the fidelity of memory is a good reaſon for relying upon its teſtimony. I deny not that this may be a reaſon to thoſe who have had this experience, and who reflect upon it. But I believe there are few who ever thought of this reaſon, or who found any need of it. It muſt be ſome very rare occaſion that leads a man to have recourſe to it; and in thoſe who have done ſo, the teſtimony of memory was believed before the experience of its fidelity, and that belief could not be cauſed by the experience which came after it.

We know ſome abſtract truths, by comparing the terms of the propoſition which expreſſes them, and perceiving ſome neceſſary relation or agreement between them. It is thus I know that two and three make five; that the diameters of a circle are all equal. Mr LOCKE having diſcovered this ſource of knowledge, too raſhly

CHAP. II. concluded that all human knowledge might be derived from it; and in this he has been followed very generally; by Mr HUME in particular.

But I apprehend, that our knowledge of the exiſtence of things contingent can never be traced to this ſource. I know that ſuch a thing exiſts, or did exiſt. This knowledge cannot be derived from the perception of a neceſſary agreement between exiſtence and the thing that exiſts, becauſe there is no ſuch neceſſary agreement; and therefore no ſuch agreement can be perceived either immediately, or by a chain of reaſoning. The thing does not exiſt neceſſarily, but by the will and power of him that made it; and there is no contradiction follows from ſuppoſing it not to exiſt.

Whence I think it follows, that our knowledge of the exiſtence of our own thoughts, of the exiſtence of all the material objects about us, and of all paſt contingencies, muſt be derived, not from a perception of neceſſary relations or agreements, but from ſome other ſource.

Our Maker has provided other means for giving us the knowledge of theſe things; means which perfectly anſwer their end, and produce the effect intended by them. But in what manner they do this, is, I fear, beyond our ſkill to explain. We know our own thoughts, and the operations of our minds, by a power which we call conſciouſneſs: But this is only giving a name to this part of our frame. It does not explain its fabric, nor how it produces in us an irreſiſtible conviction of its informations. We perceive material objects and their ſenſible qualities by our ſenſes; but how they give us this information, and how they produce our belief in it, we know not. We know many paſt events by memory; but how it gives this information, I believe, is inexplicable.

It is well known what ſubtile diſputes were held through all the ſcholaſtic ages, and are ſtill carried on about the preſcience of the Deity.

Deity. ARISTOTLE had taught, that there can be no certain foreknowledge of things contingent; and in this he has been very generally followed, upon no other grounds, as I apprehend, but that we cannot conceive how ſuch things ſhould be foreknown, and therefore conclude it to be impoſſible. Hence has ariſen an oppoſition and ſuppoſed inconſiſtency between Divine preſcience and human liberty. Some have given up the firſt in favour of the laſt, and others have given up the laſt in order to ſupport the firſt.

It is remarkable, that theſe diſputants have never apprehended that there is any difficulty in reconciling with liberty the knowledge of what is paſt, but only of what is future. It is preſcience only, and not memory, that is ſuppoſed to be hoſtile to liberty, and hardly reconcileable to it.

Yet I believe the difficulty is perfectly equal in the one caſe and in the other. I admit, that we cannot account for preſcience of the actions of a free agent. But I maintain that we can as little account for memory of the paſt actions of a free agent. If any man thinks he can prove that the actions of a free agent cannot be foreknown, he will find the ſame arguments of equal force to prove that the paſt actions of a free agent cannot be remembered. It is true, that what is paſt did certainly exiſt. It is no leſs true, that what is future will certainly exiſt. I know no reaſoning from the conſtitution of the agent, or from his circumſtances, that has not equal ſtrength, whether it be applied to his paſt or to his future actions. The paſt was, but now is not. The future will be, but now is not. The preſent is equally connected, or unconnected with both.

The only reaſon why men have apprehended ſo great diſparity in caſes ſo perfectly like, I take to be this, That the faculty of memory in ourſelves convinces us from fact, that it is not impoſſible that an intelligent being, even a finite being, ſhould have certain knowledge of paſt actions of free agents, without tracing them from

CHAP. II. from any thing neceſſarily connected with them. But having no preſcience in ourſelves correſponding to our memory of what is paſt, we find great difficulty in admitting it to be poſſible even in the Supreme Being.

A faculty which we poſſeſs in ſome degree, we eaſily admit that the Supreme Being may poſſeſs in a more perfect degree; but a faculty, which has nothing correſponding to it in our conſtitution, we will hardly allow to be poſſible. We are ſo conſtituted as to have an intuitive knowledge of many things paſt; but we have no intuitive knowledge of the future. We might perhaps have been ſo conſtituted as to have an intuitive knowledge of the future, but not of the paſt; nor would this conſtitution have been more unaccountable than the preſent, though it might be much more inconvenient. Had this been our conſtitution, we ſhould have found no difficulty in admitting that the Deity may know all things future, but very much in admitting his knowledge of things that are paſt.

Our original faculties are all unaccountable. Of theſe memory is one. He only who made them, comprehends fully how they are made, and how they produce in us not only a conception, but a firm belief and aſſurance of things which it concerns us to know.

CHAP. III.

Of Duration.

FROM the principles laid down in the firſt chapter of this Eſſay, I think it appears, that our notion of duration, as well as our belief of it, is got by the faculty of memory. It is eſſential to every thing remembered that it be ſomething which is paſt; and we cannot conceive a thing to be paſt, without conceiving ſome duration,

duration, more or leſs, between it and the preſent. As ſoon therefore as we remember any thing, we muſt have both a notion and a belief of duration. It is neceſſarily ſuggeſted by every operation of our memory; and to that faculty it ought to be aſcribed. This is therefore a proper place to conſider what is known concerning it. CHAP. III.

Duration, extenſion, and number, are the meaſures of all things ſubject to menſuration. When we apply them to finite things which are meaſured by them, they ſeem of all things to be the moſt diſtinctly conceived, and moſt within the reach of human underſtanding.

Extenſion having three dimenſions, has an endleſs variety of modifications, capable of being accurately defined; and their various relations furniſh the human mind with its moſt ample field of demonſtrative reaſoning. Duration having only one dimenſion, has fewer modifications; but theſe are clearly underſtood; and their relations admit of meaſure, proportion, and demonſtrative reaſoning.

Number is called diſcrete quantity, becauſe it is compounded of units, which are all equal and ſimilar, and it can only be divided into units. This is true, in ſome ſenſe, even of fractions of unity, to which we now commonly give the name of number. For in every fractional number the unit is ſuppoſed to be ſubdivided into a certain number of equal parts, which are the units of that denomination, and the fractions of that denomination are only diviſible into units of the ſame denomination. Duration and extenſion are not diſcrete, but continued quantity. They conſiſt of parts perfectly ſimilar, but diviſible without end.

In order to aid our conception of the magnitude and proportions of the various intervals of duration, we find it neceſſary to give a name to ſome known portion of it, ſuch as an hour, a day, a year. Theſe we conſider as units, and by the number of them contained

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contained in a larger interval, we form a diſtinct conception of its magnitude. A ſimilar expedient we find neceſſary to give us a diſtinct conception of the magnitudes and proportions of things extended. Thus, number is found neceſſary, as a common meaſure of extenſion and duration. But this perhaps is owing to the weakneſs of our underſtanding. It has even been diſcovered, by the ſagacity of Mathematicians, that this expedient does not in all caſes anſwer its intention. For there are proportions of continued quantity, which cannot be perfectly expreſſed by numbers; ſuch as that between the diagonal and ſide of a ſquare, and many others.

The parts of duration have to other parts of it the relations of prior and poſterior, and to the preſent they have the relations of paſt and future. The notion of paſt is immediately ſuggeſted by memory, as has been before obſerved. And when we have got the notions of preſent and paſt, and of prior and poſterior, we can from theſe frame a notion of the future; for the future is that which is poſterior to the preſent. Nearneſs and diſtance are relations equally applicable to time and to place. Diſtance in time, and diſtance in place, are things ſo different in their nature, and ſo like in their relation, that it is difficult to determine whether the name of diſtance is applied to both in the ſame or an analogical ſenſe.

The extenſion of bodies which we perceive by our ſenſes, leads us neceſſarily to the conception and belief of a ſpace which remains immoveable when the body is removed. And the duration of events which we remember leads us neceſſarily to the conception and belief of a duration, which would have gone on uniformly, though the event had never happened.

Without ſpace there can be nothing that is extended. And without time there can be nothing that hath duration. This I think undeniable. And yet we find that extenſion and duration

are

are not more clear and intelligible than ſpace and time are dark and difficult objects of contemplation. CHAP. III.

As there muſt be ſpace wherever any thing extended does or can exiſt, and time when there is or can be any thing that has duration, we can ſet no bounds to either, even in our imagination. They defy all limitation. The one ſwells in our conception to immenſity, the other to eternity.

An eternity paſt is an object which we cannot comprehend; but a beginning of time, unleſs we take it in a figurative ſenſe, is a contradiction. By a common figure of ſpeech, we give the name of time to thoſe motions and revolutions by which we meaſure it, ſuch as days and years. We can conceive a beginning of theſe ſenſible meaſures of time, and ſay that there was a time when they were not, a time undiſtinguiſhed by any motion or change; but to ſay that there was a time before all time, is a contradiction.

All limited duration is comprehended in time, and all limited extenſion in ſpace. Theſe, in their capacious womb, contain all finite exiſtences, but are contained by none. Created things have their particular place in ſpace, and their particular place in time; but time is every where, and ſpace at all times. They embrace each the other, and have that myſterious union which the ſchoolmen conceived between ſoul and body. The whole of each is in every part of the other.

We are at a loſs to what category or claſs of things we ought to refer them. They are not beings, but rather the receptacles of every created being, without which it could not have had the poſſibility of exiſtence. Philoſophers have endeavoured to reduce all the objects of human thought to theſe three claſſes, of ſubſtances, modes, and relations. To which of them ſhall we refer time, ſpace and number, the moſt common objects of thought?

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Sir ISAAC NEWTON thought, that the Deity, by exiſting every where, and at all times, conſtitutes time and ſpace, immenſity and eternity. This probably ſuggeſted to his great friend Dr CLARKE what he calls the argument *a priori* for the exiſtence of an immenſe and eternal Being. Space and time, he thought, are only abſtract or partial conceptions of an immenſity and eternity, which forces itſelf upon our belief. And as immenſity and eternity are not ſubſtances, they muſt be the attributes of a Being who is neceſſarily immenſe and eternal. Theſe are the ſpeculations of men of ſuperior genius. But whether they be as ſolid as they are ſublime, or whether they be the wanderings of imagination in a region beyond the limits of human underſtanding, I am unable to determine.

The ſchoolmen made eternity to be a *nunc ſtans*, that is, a moment of time that ſtands ſtill. This was to put a ſpoke into the wheel of time, and might give ſatisfaction to thoſe who are to be ſatisfied by words without meaning. But I can as eaſily believe a circle to be a ſquare as time to ſtand ſtill.

Such paradoxes and riddles, if I may ſo call them, men are involuntarily led into when they reaſon about time and ſpace, and attempt to comprehend their nature. They are probably things of which the human faculties give an imperfect and inadequate conception. Hence difficulties ariſe which we in vain attempt to overcome, and doubts which we are unable to reſolve. Perhaps ſome faculty which we poſſeſs not, is neceſſary to remove the darkneſs which hangs over them, and makes us ſo apt to bewilder ourſelves when we reaſon about them.

CHAP.

CHAP. IV.

Of Identity.

THE conviction which every man has of his identity, as far back as his memory reaches, needs no aid of philoſophy to ſtrengthen it, and no philoſophy can weaken it, without firſt producing ſome degree of inſanity.

The Philoſopher, however, may very properly conſider this conviction as a phænomenon of human nature worthy of his attention. If he can diſcover its cauſe, an addition is made to his ſtock of knowledge: If not, it muſt be held as a part of our original conſtitution, or an effect of that conſtitution produced in a manner unknown to us.

We may obſerve, firſt of all, that this conviction is indiſpenſably neceſſary to all exerciſe of reaſon. The operations of reaſon, whether in action or in ſpeculation, are made up of ſucceſſive parts. The antecedent are the foundation of the conſequent, and without the conviction that the antecedent have been ſeen or done by me, I could have no reaſon to proceed to the conſequent, in any ſpeculation, or in any active project whatever.

There can be no memory of what is paſt without the conviction that we exiſted at the time remembered. There may be good arguments to convince me that I exiſted before the earlieſt thing I can remember; but to ſuppoſe that my memory reaches a moment farther back than my belief and conviction of my exiſtence, is a contradiction.

The moment a man loſes this conviction, as if he had drunk the water of Lethe, paſt things are done away; and, in his own

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belief, he then begins to exiſt. Whatever was thought, or ſaid, or done, or ſuffered, before that period, may belong to ſome other perſon; but he can never impute it to himſelf, or take any ſubſequent ſtep that ſuppoſes it to be his doing.

From this it is evident, that we muſt have the conviction of our own continued exiſtence and identity, as ſoon as we are capable of thinking or doing any thing, on account of what we have thought, or done, or ſuffered before; that is, as ſoon as we are reaſonable creatures.

That we may form as diſtinct a notion as we are able of this phænomenon of the human mind, it is proper to conſider what is meant by identity in general, what by our own perſonal identity, and how we are led into that invincible belief and conviction which every man has of his own perſonal identity, as far as his memory reaches.

Identity in general, I take to be a relation between a thing which is known to exiſt at one time, and a thing which is known to have exiſted at another time. If you aſk whether they are one and the ſame, or two different things, every man of common ſenſe underſtands the meaning of your queſtion perfectly. Whence we may infer with certainty, that every man of common ſenſe has a clear and diſtinct notion of identity.

If you aſk a definition of identity, I confeſs I can give none; it is too ſimple a notion to admit of logical definition: I can ſay it is a relation, but I cannot find words to expreſs the ſpecific difference between this and other relations, though I am in no danger of confounding it with any other. I can ſay that diverſity is a contrary relation, and that ſimilitude and diſſimilitude are another couple of contrary relations, which every man eaſily diſtinguiſhes in his conception from identity and diverſity.

I ſee evidently that identity ſuppoſes an uninterrupted continuance of exiſtence. That which hath ceaſed to exiſt, cannot be the ſame with that which afterwards begins to exiſt; for this would be to ſuppoſe a being to exiſt after it ceaſed to exiſt, and to have had exiſtence before it was produced, which are manifeſt contradictions. Continued uninterrupted exiſtence is therefore neceſſarily implied in identity.

Hence we may infer, that identity cannot, in its proper ſenſe, be applied to our pains, our pleaſures, our thoughts, or any operation of our minds. The pain felt this day is not the ſame individual pain which I felt yeſterday, though they may be ſimilar in kind and degree, and have the ſame cauſe. The ſame may be ſaid of every feeling, and of every operation of mind: They are all ſucceſſive in their nature like time itſelf, no two moments of which can be the ſame moment.

It is otherwiſe with the parts of abſolute ſpace. They always are, and were, and will be the ſame. So far, I think, we proceed upon clear ground in fixing the notion of identity in general.

It is perhaps more difficult to aſcertain with preciſion the meaning of perſonality; but it is not neceſſary in the preſent ſubject: It is ſufficient for our purpoſe to obſerve, that all mankind place their perſonality in ſomething that cannot be divided, or conſiſt of parts. A part of a perſon is a manifeſt abſurdity.

When a man loſes his eſtate, his health, his ſtrength, he is ſtill the ſame perſon, and has loſt nothing of his perſonality. If he has a leg or an arm cut off, he is the ſame perſon he was before. The amputated member is no part of his perſon, otherwiſe it would have a right to a part of his eſtate, and be liable for a part of his engagements: It would be entitled to a ſhare of his merit and demerit, which is manifeſtly abſurd. A perſon is ſomething indiviſible, and is what LEIBNITZ calls a *monad*.

My

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My perſonal identity, therefore, implies the continued exiſtence of that indiviſible thing which I call myſelf. Whatever this ſelf may be, it is ſomething which thinks, and deliberates, and reſolves, and acts, and ſuffers. I am not thought, I am not action, I am not feeling; I am ſomething that thinks, and acts, and ſuffers. My thoughts, and actions, and feelings, change every moment; they have no continued, but a ſucceſſive exiſtence; but that *ſelf* or *I*, to which they belong, is permanent, and has the ſame relation to all the ſucceeding thoughts, actions, and feelings, which I call mine.

Such are the notions that I have of my perſonal identity. But perhaps it may be ſaid, this may all be fancy without reality. How do you know; what evidence have you, that there is ſuch a permanent ſelf which has a claim to all the thoughts, actions, and feelings, which you call yours?

To this I anſwer, that the proper evidence I have of all this is remembrance. I remember that twenty years ago I converſed with ſuch a perſon; I remember ſeveral things that paſſed in that converſation; my memory teſtifies not only that this was done, but that it was done by me who now remember it: If it was done by me, I muſt have exiſted at that time, and continued to exiſt from that time to the preſent: If the identical perſon whom I call myſelf, had not a part in that converſation, my memory is fallacious; it gives a diſtinct and poſitive teſtimony of what is not true. Every man in his ſenſes believes what he diſtinctly remembers, and every thing he remembers convinces him that he exiſted at the time remembered.

Although memory gives the moſt irreſiſtible evidence of my being the identical perſon that did ſuch a thing, at ſuch a time, I may have other good evidence of things which befel me, and which I do not remember: I know who bare me, and ſuckled me, but I do not remember theſe events.

It

It may here be obſerved, (though the obſervation would have been unneceſſary, if ſome great Philoſophers had not contradicted it) that it is not my remembering any action of mine that makes me to be the perſon who did it. This remembrance makes me to know aſſuredly that I did it; but I might have done it, though I did not remember it. That relation to me, which is expreſſed by ſaying that I did it, would be the ſame, though I had not the leaſt remembrance of it. To ſay that my remembering that I did ſuch a thing, or, as ſome chuſe to expreſs it, my being conſcious that I did it, makes me to have done it, appears to me as great an abſurdity as it would be to ſay, that my belief that the world was created, made it to be created.

When we paſs judgment on the identity of other perſons beſides ourſelves, we proceed upon other grounds, and determine from a variety of circumſtances, which ſometimes produce the firmeſt aſſurance, and ſometimes leave room for doubt. The identity of perſons has often furniſhed matter of ſerious litigation before tribunals of juſtice. But no man of a ſound mind ever doubted of his own identity, as far as he diſtinctly remembered.

The identity of a perſon is a perfect identity; wherever it is real, it admits of no degrees; and it is impoſſible that a perſon ſhould be in part the ſame, and in part different; becauſe a perſon is a *monad*, and is not diviſible into parts. The evidence of identity in other perſons beſides ourſelves, does indeed admit of all degrees, from what we account certainty, to the leaſt degree of probability. But ſtill it is true, that the ſame perſon is perfectly the ſame, and cannot be ſo in part, or in ſome degree only.

For this cauſe, I have firſt conſidered perſonal identity, as that which is perfect in its kind, and the natural meaſure of that which is imperfect.

We

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We probably at firſt derive our notion of identity from that natural conviction which every man has from the dawn of reaſon of his own identity and continued exiſtence. The operations of our minds are all ſucceſſive, and have no continued exiſtence. But the thinking being has a continued exiſtence, and we have an invincible belief, that it remains the ſame when all its thoughts and operations change.

Our judgments of the identity of objects of ſenſe ſeem to be formed much upon the ſame grounds as our judgments of the identity of other perſons beſides ourſelves.

Wherever we obſerve great ſimilarity, we are apt to preſume identity, if no reaſon appears to the contrary. Two objects ever ſo like, when they are perceived at the ſame time, cannot be the ſame: But if they are preſented to our ſenſes at different times, we are apt to think them the ſame, merely from their ſimilarity.

Whether this be a natural prejudice, or from whatever cauſe it proceeds, it certainly appears in children from infancy; and, when we grow up, it is confirmed in moſt inſtances by experience: For we rarely find two individuals of the ſame ſpecies that are not diſtinguiſhable by obvious differences.

A man challenges a thief whom he finds in poſſeſſion of his horſe or his watch, only on ſimilarity. When the watchmaker ſwears that he ſold this watch to ſuch a perſon, his teſtimony is grounded on ſimilarity. The teſtimony of witneſſes to the identity of a perſon is commonly grounded on no other evidence.

Thus it appears, that the evidence we have of our own identity, as far back as we remember, is totally of a different kind from the evidence we have of the identity of other perſons, or of objects of ſenſe. The firſt is grounded on memory, and gives undoubted certainty. The laſt is grounded on ſimilarity, and on other circumſtances,

cumſtances, which in many caſes are not ſo deciſive as to leave no room for doubt. CHAP. IV.

It may likewiſe be obſerved, that the identity of objects of ſenſe is never perfect. All bodies, as they conſiſt of innumerable parts that may be disjoined from them by a great variety of cauſes, are ſubject to continual changes of their ſubſtance, increaſing, diminiſhing, changing inſenſibly. When ſuch alterations are gradual, becauſe language could not afford a different name for every different ſtate of ſuch a changeable being, it retains the ſame name, and is conſidered as the ſame thing. Thus we ſay of an old regiment, that it did ſuch a thing a century ago, though there now is not a man alive who then belonged to it. We ſay a tree is the ſame in the ſeed-bed and in the foreſt. A ſhip of war, which has ſucceſſively changed her anchors, her tackle, her ſails, her maſts, her planks, and her timbers, while ſhe keeps the ſame name, is the ſame.

The identity therefore which we aſcribe to bodies, whether natural or artificial, is not perfect identity; it is rather ſomething, which, for the conveniency of ſpeech, we call identity. It admits of a great change of the ſubject, providing the change be gradual, ſometimes even of a total change. And the changes which in common language are made conſiſtent with identity, differ from thoſe that are thought to deſtroy it, not in kind, but in number and degree. It has no fixed nature when applied to bodies; and queſtions about the identity of a body are very often queſtions about words. But identity, when applied to perſons, has no ambiguity, and admits not of degrees, or of more and leſs: It is the foundation of all rights and obligations, and of all accountableneſs; and the notion of it is fixed and preciſe.

CHAP. V.

Mr LOCKE's *Account of the Origin of our Ideas, and particularly of the Idea of Duration.*

IT was a very laudable attempt of Mr LOCKE " to enquire into " the original of thoſe ideas, notions, or whatever you pleaſe " to call them, which a man obſerves, and is conſcious to himſelf " he has in his mind, and the ways whereby the underſtanding " comes to be furniſhed with them." No man was better qualified for this inveſtigation; and I believe no man ever engaged in it with a more ſincere love of truth.

His ſucceſs, though great, would, I apprehend, have been greater, if he had not too early formed a ſyſtem or hypotheſis upon this ſubject, without all the caution and patient induction, which is neceſſary in drawing general concluſions from facts.

The ſum of his doctrine I take to be this, " That all our ideas or notions may be reduced to two claſſes, the ſimple and the complex: That the ſimple are purely the work of Nature, the underſtanding being merely paſſive in receiving them: That they are all ſuggeſted by two powers of the mind, to wit, ſenſation and reflection; and that they are the materials of all our knowledge. That the other claſs of complex ideas are formed by the underſtanding itſelf, which being once ſtored with ſimple ideas of ſenſation and reflection, has the power to repeat, to compare, and to combine them even to an almoſt infinite variety, and ſo can make at pleaſure new complex ideas: But that it is not in the power of the moſt exalted wit, or enlarged underſtanding, by any quickneſs or variety of thought, to invent or frame one new ſimple idea in the mind, not taken in by the two ways before mentioned. That as our power over

over the material world reaches only to the compounding, dividing, and putting together, in various forms, the matter which God has made, but reaches not to the production or annihilation of a ſingle atom; ſo we may compound, compare, and abſtract the original and ſimple ideas which Nature has given us; but are unable to faſhion in our underſtanding any ſimple idea, not received in by our ſenſes from external objects, or by reflection from the operations of our own mind about them."

This account of the origin of all our ideas is adopted by Biſhop BERKELEY and Mr HUME; but ſome very ingenious Philoſophers, who have a high eſteem of LOCKE's Eſſay, are diſſatisfied with it.

Dr HUTCHESON of Glaſgow, in his Enquiry into the Ideas of Beauty and Virtue, has endeavoured to ſhow that theſe are original and ſimple ideas, furniſhed by original powers, which he calls the ſenſe of beauty and the moral ſenſe.

Dr PRICE, in his Review of the Principal Queſtions and Difficulties in Morals, has obſerved very juſtly, that if we take the words *ſenſation* and *reflection*, as Mr LOCKE has defined them in the beginning of his excellent Eſſay, it will be impoſſible to derive ſome of the moſt important of our ideas from them; and that, by the underſtanding, that is by our judging and reaſoning power, we are furniſhed with many ſimple and original notions.

Mr LOCKE ſays, that, by reflection, he would be underſtood to mean "the notice which the mind takes of its own operations, "and the manner of them." This, I think, we commonly call conſciouſneſs; from which, indeed, we derive all the notions we have of the operations of our own minds; and he often ſpeaks of the operations of our own minds, as the only objects of reflection.

When reflection is taken in this confined ſenſe, to ſay, that all our ideas are ideas either of ſenſation or reflection, is to ſay, that

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every thing we can conceive is either ſome object of ſenſe, or ſome operation of our own minds, which is far from being true.

But the word reflection is commonly uſed in a much more extenſive ſenſe; it is applied to many operations of the mind, with more propriety than to that of conſciouſneſs. We reflect, when we remember, or call to mind what is paſt, and ſurvey it with attention. We reflect, when we define, when we diſtinguiſh, when we judge, when we reaſon, whether about things material or intellectual.

When reflection is taken in this ſenſe, which is more common, and therefore more proper than the ſenſe which Mr LOCKE has put upon it, it may be juſtly ſaid to be the only ſource of all our diſtinct and accurate notions of things. For, although our firſt notions of material things are got by the external ſenſes, and our firſt notions of the operations of our own minds by conſciouſneſs, theſe firſt notions are neither ſimple nor clear. Our ſenſes and our conſciouſneſs are continually ſhifting from one object to another; their operations are tranſient and momentary, and leave no diſtinct notion of their objects, until they are recalled by memory, examined with attention, and compared with other things.

This reflection is not one power of the mind; it comprehends many; ſuch as recollection, attention, diſtinguiſhing, comparing, judging. By theſe powers our minds are furniſhed not only with many ſimple and original notions, but with all our notions, which are accurate and well defined, and which alone are the proper materials of reaſoning. Many of theſe, are neither notions of the objects of ſenſe, nor of the operations of our own minds, and therefore neither ideas of ſenſation, nor of reflection, in the ſenſe that Mr LOCKE gives to reflection. But if any one chuſes to call them ideas of reflection, taking the word in the more common and proper ſenſe, I have no objection.

Mr

Mr LOCKE ſeems to me to have uſed the word reflection ſometimes in that limited ſenſe which he has given to it in the definition before mentioned, and ſometimes to have fallen unawares into the common ſenſe of the word; and by this ambiguity his account of the origin of our ideas is darkened and perplexed.

Having premiſed theſe things in general of Mr LOCKE's theory of the origin of our ideas or notions, I proceed to ſome obſervations on his account of the idea of duration.

"Reflection, he ſays, upon the train of ideas, which appear "one after another in our minds, is that which furniſhes us with "the idea of ſucceſſion; and the diſtance between any two parts "of that ſucceſſion, is that we call duration."

If it be meant that the idea of ſucceſſion is prior to that of duration, either in time, or in the order of nature, this, I think, is impoſſible, becauſe ſucceſſion, as Dr PRICE juſtly obſerves, preſuppoſes duration, and can in no ſenſe be prior to it; and therefore it would be more proper to derive the idea of ſucceſſion from that of duration.

But how do we get the idea of ſucceſſion? It is, ſays he, by reflecting upon the train of ideas, which appear one after another in our minds.

Reflecting upon the train of ideas can be nothing but remembering it, and giving attention to what our memory teſtifies concerning it; for if we did not remember it, we could not have a thought about it. So that it is evident that this reflection includes remembrance, without which there could be no reflection on what is paſt, and conſequently no idea of ſucceſſion.

It may here be obſerved, that if we ſpeak ſtrictly and philoſophically, no kind of ſucceſſion can be an object either of the

ſenſes,

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ſenſes, or of conſciouſneſs; becauſe the operations of both are confined to the preſent point of time, and there can be no ſucceſſion in a point of time; and on that account the motion of a body, which is a ſucceſſive change of place, could not be obſerved by the ſenſes alone without the aid of memory.

As this obſervation ſeems to contradict the common ſenſe and common language of mankind, when they affirm that they ſee a body move, and hold motion to be an object of the ſenſes, it is proper to take notice, that this contradiction between the Philoſopher and the vulgar is apparent only, and not real. It ariſes from this, that Philoſophers and the vulgar differ in the meaning they put upon what is called the *preſent* time, and are thereby led to make a different limit between ſenſe and memory.

Philoſophers give the name of the *preſent* to that indiviſible point of time, which divides the future from the paſt: But the vulgar find it more convenient in the affairs of life, to give the name of *preſent* to a portion of time, which extends more or leſs, according to circumſtances, into the paſt or the future. Hence we ſay, the preſent hour, the preſent year, the preſent century, though one point only of theſe periods can be preſent in the philoſophical ſenſe.

It has been obſerved by Grammarians, that the preſent tenſe in verbs is not confined to an indiviſible point of time, but is ſo far extended as to have a beginning, a middle, and an end; and that in the moſt copious and accurate languages, theſe different parts of the preſent are diſtinguiſhed by different forms of the verb.

As the purpoſes of converſation make it convenient to extend what is called the preſent, the ſame reaſon leads men to extend the province of ſenſe, and to carry its limit as far back as they carry the preſent. Thus a man may ſay, I ſaw ſuch a perſon juſt now; it would be ridiculous to find fault with this way of ſpeaking, becauſe it is authoriſed by cuſtom, and has a diſtinct meaning: But

if

if we ſpeak philoſophically, the ſenſes do not teſtify what we ſaw, but only what we ſee; what I ſaw laſt moment I conſider as the teſtimony of ſenſe, though it is now only the teſtimony of memory.

There is no neceſſity in common life of dividing accurately the provinces of ſenſe and of memory; and therefore we aſſign to ſenſe, not an indiviſible point of time, but that ſmall portion of time which we call the preſent, which has a beginning, a middle, and an end.

Hence it is eaſy to ſee, that though in common language we ſpeak with perfect propriety and truth, when we ſay, that we ſee a body move, and that motion is an object of ſenſe, yet when as Philoſophers we diſtinguiſh accurately the province of ſenſe from that of memory, we can no more ſee what is paſt, though but a moment ago, than we can remember what is preſent; ſo that ſpeaking philoſophically, it is only by the aid of memory that we diſcern motion, or any ſucceſſion whatſoever: We ſee the preſent place of the body; we remember the ſucceſſive advance it made to that place: The firſt can then only give us a conception of motion, when joined to the laſt.

Having conſidered the account given by Mr LOCKE, of the idea of ſucceſſion, we ſhall next conſider how, from the idea of ſucceſſion, he derives the idea of duration.

" The diſtance, he ſays, between any parts of that ſucceſſion, or " between the appearance of any two ideas in our minds, is that " we call duration."

To conceive this the more diſtinctly, let us call the diſtance between an idea and that which immediately ſucceeds it, one element of duration; the diſtance between an idea and the ſecond that ſucceeds it, two elements, and ſo on: If ten ſuch elements make duration,

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duration, then one muſt make duration, otherwiſe duration muſt be made up of parts that have no duration, which is impoſſible.

For, ſuppoſe a ſucceſſion of as many ideas as you pleaſe, if none of theſe ideas have duration, nor any interval of duration be between one and another, then it is perfectly evident there can be no interval of duration between the firſt and the laſt, how great ſoever their number be. I conclude therefore, that there muſt be duration in every ſingle interval or element of which the whole duration is made up. Nothing indeed is more certain than that every elementary part of duration muſt have duration, as every elementary part of extenſion muſt have extenſion.

Now it muſt be obſerved, that in theſe elements of duration, or ſingle intervals of ſucceſſive ideas, there is no ſucceſſion of ideas, yet we muſt conceive them to have duration; whence we may conclude with certainty, that there is a conception of duration, where there is no ſucceſſion of ideas in the mind.

We may meaſure duration by the ſucceſſion of thoughts in the mind, as we meaſure length by inches or feet; but the notion or idea of duration muſt be antecedent to the menſuration of it, as the notion of length is antecedent to its being meaſured.

Mr LOCKE draws ſome concluſions from his account of the idea of duration, which may ſerve as a touchſtone to diſcover how far it is genuine. One is, that if it were poſſible for awaking man to keep only one idea in his mind without variation, or the ſucceſſion of others, he would have no perception of duration at all; and the moment he began to have this idea, would ſeem to have no diſtance from the moment he ceaſed to have it.

Now that one idea ſhould ſeem to have no duration, and that a multiplication of that *no duration* ſhould ſeem to have duration, appears to me as impoſſible as that the multiplication of nothing ſhould produce ſomething.

Another

Another concluſion which the author draws from this theory is, that the ſame period of duration appears long to us, when the ſucceſſion of ideas in our mind is quick, and ſhort when the ſucceſſion is ſlow.

There can be no doubt but the ſame length of duration appears in ſome circumſtances much longer than in others; the time appears long when a man is impatient under any pain or diſtreſs, or when he is eager in the expectation of ſome happineſs: On the other hand, when he is pleaſed and happy in agreeable converſation, or delighted with a variety of agreeable objects that ſtrike his ſenſes, or his imagination, time flies away, and appears ſhort.

According to Mr LOCKE's theory, in the firſt of theſe caſes, the ſucceſſion of ideas is very quick, and in the laſt very ſlow: I am rather inclined to think that the very contrary is the truth. When a man is racked with pain, or with expectation, he can hardly think of any thing but his diſtreſs; and the more his mind is occupied by that ſole object, the longer the time appears. On the other hand, when he is entertained with cheerful muſic, with lively converſation, and briſk ſallies of wit, there ſeems to be the quickeſt ſucceſſion of ideas, but the time appears ſhorteſt.

I have heard a military officer, a man of candour and obſervation, ſay, that the time he was engaged in hot action always appeared to him much ſhorter than it really was. Yet I think it cannot be ſuppoſed, that the ſucceſſion of ideas was then ſlower than uſual.

If the idea of duration were got merely by the ſucceſſion of ideas in our minds, that ſucceſſion muſt to ourſelves appear equally quick at all times, becauſe the only meaſure of duration is the number of ſucceeding ideas; but I believe every man capable of reflection will be ſenſible, that at one time his thoughts come ſlowly and heavily, and at another time have a much quicker and livelier motion.

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I know of no ideas or notions that have a better claim to be accounted ſimple and original than thoſe of ſpace and time. It is eſſential both to ſpace and time to be made up of parts, but every part is ſimilar to the whole, and of the ſame nature. Different parts of ſpace, as it has three dimenſions, may differ both in figure and in magnitude; but time having only one dimenſion, its parts can differ only in magnitude; and, as it is one of the ſimpleſt objects of thought, the conception of it muſt be purely the effect of our conſtitution, and given us by ſome original power of the mind.

The ſenſe of ſeeing, by itſelf, gives us the conception and belief of only two dimenſions of extenſion, but the ſenſe of touch diſcovers three; and reaſon, from the contemplation of finite extended things, leads us neceſſarily to the belief of an immenſity that contains them. In like manner, memory gives us the conception and belief of finite intervals of duration. From the contemplation of theſe, reaſon leads us neceſſarily to the belief of an eternity, which comprehends all things that have a beginning and end. Our conceptions, both of ſpace and time, are probably partial and inadequate, and therefore we are apt to loſe ourſelves, and to be embarraſſed in our reaſonings about them.

Our underſtanding is no leſs puzzled when we conſider the minuteſt parts of time and ſpace than when we conſider the whole. We are forced to acknowledge, that in their nature they are diviſible without end or limit; but there are limits beyond which our faculties can divide neither the one nor the other.

It may be determined by experiment, what is the leaſt angle under which an object may be diſcerned by the eye, and what is the leaſt interval of duration that may be diſcerned by the ear. I believe theſe may be different in different perſons: But ſurely there is a limit which no man can exceed: And what our faculties can no longer divide is ſtill diviſible in itſelf, and, by beings of ſuperior perfection, may be divided into thouſands of parts.

I have reaſon to believe, that a good eye in the prime of life may ſee an object under an angle not exceeding half a minute of a degree, and I believe there are ſome human eyes ſtill more perfect. But even this degree of perfection will appear great, if we conſider how ſmall a part of the retina of the eye it muſt be which ſubtends an angle of half a minute.

Suppoſing the diſtance between the centre of the eye and the retina to be ſix or ſeven tenths of an inch, the ſubtenſe of an angle of half a minute to that radius, or the breadth of the image of an object ſeen under that angle, will not be above the ten thouſandth part of an inch. This ſhews ſuch a wonderful degree of accuracy in the refracting power of a good eye, that a pencil of rays coming from one point of the object ſhall meet in one point of the retina, ſo as not to deviate from that point the ten thouſandth part of an inch. It ſhews, likewiſe, that ſuch a motion of an object as makes its image on the retina to move the ten thouſandth part of an inch, is diſcernible by the mind.

In order to judge to what degree of accuracy we can meaſure ſhort intervals of time, it may be obſerved, that one who has given attention to the motion of a Second pendulum, will be able to beat ſeconds for a minute with a very ſmall error. When he continues this exerciſe long, as for five or ten minutes, he is apt to err, more even than in proportion to the time, for this reaſon, as I apprehend, that it is difficult to attend long to the moments as they paſs, without wandering after ſome other object of thought.

I have found, by ſome experiments, that a man may beat ſeconds for one minute, without erring above one ſecond in the whole ſixty; and I doubt not but by long practice he might do it ſtill more accurately. From this I think it follows, that the ſixtieth part of a ſecond of time is diſcernible by the human mind.

CHAP. VI.

Of Mr LOCKE's *Account of our perſonal Identity.*

IN a long chapter upon identity and diverſity, Mr LOCKE has made many ingenious and juſt obſervations, and ſome which I think cannot be defended. I ſhall only take notice of the account he gives of our own perſonal identity. His doctrine upon this ſubject has been cenſured by Biſhop BUTLER, in a ſhort eſſay ſubjoined to his Analogy, with whoſe ſentiments I perfectly agree.

Identity, as was obſerved chap. 4. of this Eſſay, ſuppoſes the continued exiſtence of the being of which it is affirmed, and therefore can be applied only to things which have a continued exiſtence. While any being continues to exiſt, it is the ſame being; but two beings which have a different beginning or a different ending of their exiſtence, cannot poſſibly be the ſame. To this I think Mr LOCKE agrees.

He obſerves very juſtly, that to know what is meant by the ſame perſon, we muſt conſider what the word *perſon* ſtands for; and he defines a perſon to be an intelligent being, endowed with reaſon and with conſciouſneſs, which laſt he thinks inſeparable from thought.

From this definition of a perſon, it muſt neceſſarily follow, that while the intelligent being continues to exiſt and to be intelligent, it muſt be the ſame perſon. To ſay that the intelligent being is the perſon, and yet that the perſon ceaſes to exiſt, while the intelligent being continues, or that the perſon continues while the intelligent being ceaſes to exiſt, is to my apprehenſion a manifeſt contradiction.

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One would think that the definition of a perſon ſhould perfectly aſcertain the nature of perſonal identity, or wherein it conſiſts, though it might ſtill be a queſtion how we come to know and be aſſured of our perſonal identity.

Mr LOCKE tells us however, "that perſonal identity, that is, the "ſameneſs of a rational being, conſiſts in conſciouſneſs alone; and, "as far as this conſciouſneſs can be extended backwards to any "paſt action or thought, ſo far reaches the identity of that per-"ſon. So that whatever hath the conſciouſneſs of preſent and "paſt actions, is the ſame perſon to whom they belong."

This doctrine hath ſome ſtrange conſequences, which the author was aware of. Such as, that if the ſame conſciouſneſs can be transferred from one intelligent being to another, which he thinks we cannot ſhew to be impoſſible, then two or twenty intelligent beings may be the ſame perſon. And if the intelligent being may loſe the conſciouſneſs of the actions done by him, which ſurely is poſſible, then he is not the perſon that did thoſe actions; ſo that one intelligent being may be two or twenty different perſons, if he ſhall ſo often loſe the conſciouſneſs of his former actions.

There is another conſequence of this doctrine, which follows no leſs neceſſarily, though Mr LOCKE probably did not ſee it. It is, that a man may be, and at the ſame time not be, the perſon that did a particular action.

Suppoſe a brave officer to have been flogged when a boy at ſchool, for robbing an orchard, to have taken a ſtandard from the enemy in his firſt campaign, and to have been made a general in advanced life: Suppoſe alſo, which muſt be admitted to be poſſible, that when he took the ſtandard, he was conſcious of his having been flogged at ſchool, and that when made a general he was conſcious of his taking the ſtandard, but had abſolutely loſt the conſciouſneſs of his flogging.

Theſe

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Theſe things being ſuppoſed, it follows, from Mr LOCKE's doctrine, that he who was flogged at ſchool is the ſame perſon who took the ſtandard, and that he who took the ſtandard is the ſame perſon who was made a general. Whence it follows, if there be any truth in logic, that the general is the ſame perſon with him who was flogged at ſchool. But the general's conſciouſneſs does not reach ſo far back as his flogging, therefore, according to Mr LOCKE's doctrine, he is not the perſon who was flogged. Therefore the general is, and at the ſame time is not the ſame perſon with him who was flogged at ſchool.

Leaving the conſequences of this doctrine to thoſe who have leiſure to trace them, we may obſerve, with regard to the doctrine itſelf,

Firſt, That Mr LOCKE attributes to conſciouſneſs the conviction we have of our paſt actions, as if a man may now be conſcious of what he did twenty years ago. It is impoſſible to underſtand the meaning of this, unleſs by conſciouſneſs be meant memory, the only faculty by which we have an immediate knowledge of our paſt actions.

Sometimes, in popular diſcourſe, a man ſays he is conſcious that he did ſuch a thing, meaning that he diſtinctly remembers that he did it. It is unneceſſary, in common diſcourſe, to fix accurately the limits between conſciouſneſs and memory. This was formerly ſhewn to be the caſe with regard to ſenſe and memory: And therefore diſtinct remembrance is ſometimes called ſenſe, ſometimes conſciouſneſs, without any inconvenience.

But this ought to be avoided in philoſophy, otherwiſe we confound the different powers of the mind, and aſcribe to one what really belongs to another. If a man can be conſcious of what he did twenty years or twenty minutes ago, there is no uſe for memory, nor ought we to allow that there is any ſuch faculty. The faculties

faculties of conſciouſneſs and memory are chiefly diſtinguiſhed by this, that the firſt is an immediate knowledge of the preſent, the ſecond an immediate knowledge of the paſt.

When, therefore, Mr LOCKE's notion of perſonal identity is properly expreſſed, it is, that perſonal identity conſiſts in diſtinct remembrance: For, even in the popular ſenſe, to ſay that I am conſcious of a paſt action, means nothing elſe than that I diſtinctly remember that I did it.

Secondly, It may be obſerved, that, in this doctrine, not only is conſciouſneſs confounded with memory, but, which is ſtill more ſtrange, perſonal identity is confounded with the evidence which we have of our perſonal identity.

It is very true, that my remembrance that I did ſuch a thing is the evidence I have that I am the identical perſon who did it. And this, I am apt to think, Mr LOCKE meant: But to ſay that my remembrance that I did ſuch a thing, or my conſciouſneſs, makes me the perſon who did it, is, in my apprehenſion, an abſurdity too groſs to be entertained by any man who attends to the meaning of it: For it is to attribute to memory or conſciouſneſs a ſtrange magical power of producing its object, though that object muſt have exiſted before the memory or conſciouſneſs which produced it.

Conſciouſneſs is the teſtimony of one faculty; memory is the teſtimony of another faculty: And to ſay that the teſtimony is the cauſe of the thing teſtified, this ſurely is abſurd, if any thing be, and could not have been ſaid by Mr LOCKE, if he had not confounded the teſtimony with the thing teſtified.

When a horſe that was ſtolen is found and claimed by the owner, the only evidence he can have, or that a judge or witneſſes can have that this is the very identical horſe which was his property,

is

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is ſimilitude. But would it not be ridiculous from this to infer that the identity of a horſe conſiſts in ſimilitude only? The only evidence I have that I am the identical perſon who did ſuch actions is, that I remember diſtinctly I did them; or, as Mr LOCKE expreſſes it, I am conſcious I did them. To infer from this, that perſonal identity conſiſts in conſciouſneſs, is an argument, which, if it had any force, would prove the identity of a ſtolen horſe to conſiſt ſolely in ſimilitude.

Thirdly, Is it not ſtrange that the ſameneſs or identity of a perſon ſhould conſiſt in a thing which is continually changing, and is not any two minutes the ſame?

Our conſciouſneſs, our memory, and every operation of the mind, are ſtill flowing like the water of a river, or like time itſelf. The conſciouſneſs I have this moment, can no more be the ſame conſciouſneſs I had laſt moment, than this moment can be the laſt moment. Identity can only be affirmed of things which have a continued exiſtence. Conſciouſneſs, and every kind of thought, is tranſient and momentary, and has no continued exiſtence; and therefore, if perſonal identity conſiſted in conſciouſneſs, it would certainly follow, that no man is the ſame perſon any two moments of his life; and as the right and juſtice of reward and puniſhment is founded on perſonal identity, no man could be reſponſible for his actions.

But though I take this to be the unavoidable conſequence of Mr LOCKE's doctrine concerning perſonal identity, and though ſome perſons may have liked the doctrine the better on this account, I am far from imputing any thing of this kind to Mr LOCKE. He was too good a man not to have rejected with abhorrence a doctrine which he believed to draw this conſequence after it.

Fourthly, There are many expreſſions uſed by Mr LOCKE in ſpeaking of perſonal identity, which to me are altogether unintelligible,

ligible, unleſs we ſuppoſe that he confounded that ſameneſs or identity, which we aſcribe to an individual, with the identity which in common diſcourſe is often aſcribed to many individuals of the ſame ſpecies.

When we ſay that pain and pleaſure, conſciouſneſs and memory, are the ſame in all men, this ſameneſs can only mean ſimilarity, or ſameneſs of kind; but that the pain of one man can be the ſame individual pain with that of another man, is no leſs impoſſible than that one man ſhould be another man; the pain felt by me yeſterday, can no more be the pain I feel to-day, than yeſterday can be this day; and the ſame thing may be ſaid of every paſſion and of every operation of the mind: The ſame kind or ſpecies of operation may be in different men, or in the ſame man at different times; but it is impoſſible that the ſame individual operation ſhould be in different men, or in the ſame man at different times.

When Mr LOCKE therefore ſpeaks of "the ſame conſciouſneſs "being continued through a ſucceſſion of different ſubſtances;" when he ſpeaks of "repeating the idea of a paſt action, with the "ſame conſciouſneſs we had of it at the firſt," and of "the ſame "conſciouſneſs extending to actions paſt and to come;" theſe expreſſions are to me unintelligible, unleſs he means not the ſame individual conſciouſneſs, but a conſciouſneſs that is ſimilar, or of the ſame kind.

If our perſonal identity conſiſts in conſciouſneſs, as this conſciouſneſs cannot be the ſame individually any two moments, but only of the ſame kind, it would follow, that we are not for any two moments the ſame individual perſons, but the ſame kind of perſons.

As our conſciouſneſs ſometimes ceaſes to exiſt, as in ſound ſleep, our perſonal identity muſt ceaſe with it. Mr LOCKE allows, that the ſame thing cannot have two beginnings of exiſtence, ſo that our identity would be irrecoverably gone every time we ceaſe to think, if it was but for a moment.

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Theories concerning Memory.

THE common theory of ideas, that is of images in the brain or in the mind, of all the objects of thought, has been very generally applied to account for the faculties of memory and imagination, as well as that of perception by the ſenſes.

The ſentiments of the Peripatetics are expreſſed by ALEXANDER APHRODISIENSIS, one of the earlieſt Greek Commentators on ARISTOTLE, in theſe words, as they are tranſlated by Mr HARRIS in his Hermes, "Now what fancy or imagination is, we may "explain as follows: We may conceive to be formed within us, "from the operations of our ſenſes about ſenſible objects, ſome "impreſſion, as it were, or picture in our original ſenſorium, be- "ing a relict of that motion cauſed within us by the external ob- "ject; a relict, which when the external object is no longer pre- "ſent, remains, and is ſtill preſerved, being as it were its image, "and which, by being thus preſerved, becomes the cauſe of our "having memory: Now ſuch a ſort of relict, and as it were im- "preſſion, they call fancy or imagination."

Another paſſage from ALCINOUS *of the doctrines of* PLATO, chap. 4. ſhews the agreement of the ancient Platoniſts and Peripatetics in this theory, "When the form or type of things is im- "printed on the mind by the organs of the ſenſes, and ſo imprinted "as not to be deleted by time, but preſerved firm and laſting, its "preſervation is called memory."

Upon this principle ARISTOTLE imputes the ſhortneſs of memory in children to this cauſe, that their brain is too moiſt and ſoft

ſoft to retain impreſſions made upon it: And the defect of memory in old men he imputes, on the contrary, to the hardneſs and rigidity of the brain, which hinders its receiving any durable impreſſion.

This ancient theory of the cauſe of memory is defective in two reſpects: *Firſt*, If the cauſe aſſigned did really exiſt, it by no means accounts for the phænomenon: And, *ſecondly*, There is no evidence, nor even probability, that that cauſe exiſts.

It is probable, that in perception ſome impreſſion is made upon the brain as well as upon the organ and nerves, becauſe all the nerves terminate in the brain, and becauſe diſorders and hurts of the brain are found to affect our powers of perception when the external organ and nerve are ſound; but we are totally ignorant of the nature of this impreſſion upon the brain: It can have no reſemblance to the object perceived, nor does it in any degree account for that ſenſation and perception which are conſequent upon it. Theſe things have been argued in the ſecond Eſſay, and ſhall now be taken for granted, to prevent repetition.

If the impreſſion upon the brain be inſufficient to account for the perception of objects that are preſent, it can as little account for the memory of thoſe that are paſt.

So that if it were certain, that the impreſſions made on the brain in perception remain as long as there is any memory of the object; all that could be inferred from this is, that, by the laws of Nature, there is a connection eſtabliſhed between that impreſſion, and the remembrance of that object. But how the impreſſion contributes to this remembrance, we ſhould be quite ignorant; it being impoſſible to diſcover how thought of any kind ſhould be produced, by an impreſſion on the brain, or upon any part of the body.

To ſay that this impreſſion is memory, is abſurd, if underſtood literally. If it is only meant that it is the cauſe of memory, it

CHAP. VII. ought to be ſhown how it produces this effect, otherwiſe memory remains as unaccountable as before.

If a Philoſopher ſhould undertake to account for the force of gunpowder, in the diſcharge of a muſket, and then tell us gravely, that the cauſe of this phænomenon is the drawing of the trigger, we ſhould not be much wiſer by this account. As little are we inſtructed in the cauſe of memory, by being told that it is cauſed by a certain impreſſion on the brain. For ſuppoſing, that impreſſion on the brain were as neceſſary to memory as the drawing of the trigger is to the diſcharge of the muſket, we are ſtill as ignorant as we were how memory is produced; ſo that, if the cauſe of memory, aſſigned by this theory, did really exiſt, it does not in any degree account for memory.

Another defect in this theory is, that there is no evidence, nor probability that the cauſe aſſigned does exiſt; that is, that the impreſſion made upon the brain in perception remains after the object is removed.

That impreſſion, whatever be its nature, is cauſed by the impreſſion made by the object upon the organ of ſenſe, and upon the nerve. Philoſophers ſuppoſe, without any evidence, that when the object is removed, and the impreſſion upon the organ and nerve ceaſes, the impreſſion upon the brain continues, and is permanent; that is, that when the cauſe is removed the effect continues. The brain ſurely does not appear more fitted to retain an impreſſion than the organ and nerve.

But granting that the impreſſion upon the brain continues after its cauſe is removed, its effects ought to continue while it continues; that is, the ſenſation and perception ſhould be as permanent as the impreſſion upon the brain, which is ſuppoſed to be their cauſe. But here again the Philoſopher makes a ſecond ſuppoſition, with

with as little evidence, but of a contrary nature, to wit, that, while the cauſe remains, the effect ceaſes. CHAP. VII.

If this ſhould be granted alſo, a third muſt be made, That the ſame cauſe, which at firſt produced ſenſation and perception, does afterwards produce memory; an operation eſſentially different, both from ſenſation and perception.

A fourth ſuppoſition muſt be made, That this cauſe, though it be permanent, does not produce its effect at all times; it muſt be like an inſcription which is ſometimes covered with rubbiſh, and on other occaſions made legible: For the memory of things is often interrupted for a long time, and circumſtances bring to our recollection what had been long forgot. After all, many things are remembered which were never perceived by the ſenſes, being no objects of ſenſe, and therefore which could make no impreſſion upon the brain by means of the ſenſes.

Thus, when Philoſophers have piled one ſuppoſition upon another, as the giants piled the mountains, in order to ſcale the heavens, all is to no purpoſe, memory remains unaccountable; and we know as little how we remember things paſt, as how we are conſcious of the preſent.

But here it is proper to obſerve, that although impreſſions upon the brain give no aid in accounting for memory, yet it is very probable, that, in the human frame, memory is dependent on ſome proper ſtate or temperament of the brain.

Although the furniture of our memory bears no reſemblance to any temperament of brain whatſoever, as indeed it is impoſſible it ſhould; yet Nature may have ſubjected us to this law, that a certain conſtitution or ſtate of the brain is neceſſary to memory. That this is really the caſe, many well known facts lead us to conclude.

It

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It is poſſible, that, by accurate obſervation, the proper means may be diſcovered of preſerving that temperament of the brain which is favourable to memory, and of remedying the diſorders of that temperament. This would be a very noble improvement of the medical art. But if it ſhould ever be attained, it would give no aid to underſtand how one ſtate of the brain aſſiſts memory, and another hurts it.

I know certainly, that the impreſſion made upon my hand by the prick of a pin occaſions acute pain. But can any Philoſopher ſhow how this cauſe produces the effect? The nature of the impreſſion is here perfectly known; but it gives no help to underſtand how that impreſſion affects the mind; and if we knew as diſtinctly that ſtate of the brain which cauſes memory, we ſhould ſtill be as ignorant as before how that ſtate contributes to memory. We might have been ſo conſtituted, for any thing that I know, that the prick of a pin in the hand, inſtead of cauſing pain, ſhould cauſe remembrance; nor would that conſtitution be more unaccountable than the preſent.

The body and mind operate on each other, according to fixed laws of Nature; and it is the buſineſs of a Philoſopher to diſcover thoſe laws by obſervation and experiment: But, when he has diſcovered them, he muſt reſt in them as facts, whoſe cauſe is inſcrutable to the human underſtanding.

Mr LOCKE, and thoſe who have followed him, ſpeak with more reſerve than the ancients, and only incidentally, of impreſſions on the brain as the cauſe of memory, and impute it rather to our retaining in our minds the ideas, got either by ſenſation or reflection.

This, Mr LOCKE ſays, may be done two ways; "*Firſt*, by "keeping the idea for ſome time actually in view, which is called "*contemplation*. *Secondly*, by the power to revive again in our minds "thoſe ideas, which, after imprinting, have diſappeared, or have "been,

" been, as it were, laid out of ſight; and this is memory, which CHAP. VII.
" is, as it were, the ſtorehouſe of our ideas."

To explain this more diſtinctly, he immediately adds the following obſervation: " But our ideas being nothing but actual per-
" ceptions in the mind, which ceaſe to be any thing, when there is
" no perception of them, this laying up of our ideas in the repo-
" ſitory of the memory, ſignifies no more but this, that the mind
" has a power, in many caſes, to revive perceptions which it once
" had, with this additional perception annexed to them, that it has
" had them before; and in this ſenſe it is, that our ideas are ſaid
" to be in our memories, when indeed they are actually no where;
" but only there is an ability in the mind, when it will, to revive
" them again, and, as it were, paint them anew upon itſelf, though
" ſome with more, ſome with leſs difficulty, ſome more lively, and
" others more obſcurely."

In this account of memory, the repeated uſe of the phraſe, *as it were*, leads one to judge that it is partly figurative; we muſt therefore endeavour to diſtinguiſh the figurative part from the philoſophical. The firſt being addreſſed to the imagination, exhibits a picture of memory, which, to have its effect, muſt be viewed at a proper diſtance, and from a particular point of view. The ſecond being addreſſed to the underſtanding, ought to bear a near inſpection, and a critical examination.

The analogy between memory and a repoſitory, and between remembering and retaining, is obvious, and is to be found in all languages, it being very natural to expreſs the operations of the mind by images taken from things material. But in philoſophy we ought to draw aſide the veil of imagery, and to view them naked.

When therefore memory is ſaid to be a repoſitory or ſtorehouſe of ideas, where they are laid up when not perceived, and again brought forth as there is occaſion, I take this to be popular and rhetorical.

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But we are told, " That this laying up of our ideas in the repoſitory of the memory ſignifies no more than this, that the mind has a power to revive perceptions, which it once had, with this additional perception annexed to them, that it has had them before." This I think muſt be underſtood literally and philoſophically.

But it ſeems to me as difficult to revive things that have ceaſed to be any thing, as to lay them up in a repoſitory, or to bring them out of it. When a thing is once annihilated, the ſame thing cannot be again produced, though another thing ſimilar to it may. Mr LOCKE, in another place, acknowledges, that the ſame thing cannot have two beginnings of exiſtence; and that things that have different beginnings are not the ſame, but diverſe. From this it follows, that an ability to revive our ideas or perceptions, after they have ceaſed to be, can ſignify no more but an ability to create new ideas or perceptions ſimilar to thoſe we had before.

They are ſaid " to be revived, with this additional perception, that we have had them before." This ſurely would be a fallacious perception, ſince they could not have two beginnings of exiſtence; nor could we believe them to have two beginnings of exiſtence. We can only believe, that we had formerly ideas or perceptions very like to them, though not identically the ſame. But whether we perceive them to be the ſame, or only like to thoſe we had before, this perception, one would think, ſuppoſes a remembrance of thoſe we had before, otherwiſe the ſimilitude or identity could not be perceived.

Another phraſe is uſed to explain this reviving of our perceptions. " The mind, as it were, paints them anew upon itſelf." There may be ſomething figurative in this; but making due allowance

lowance for that, it muſt imply, that the mind, which paints the things that have ceaſed to exiſt, muſt have the memory of what they were, ſince every painter muſt have a copy either before his eye, or in his imagination and memory.

Theſe remarks upon Mr LOCKE's account of memory are intended to ſhow, that his ſyſtem of ideas gives no light to this faculty, but rather tends to darken it; as little does it make us underſtand how we remember, and by that means have the certain knowledge of things paſt.

Every man knows what memory is, and has a diſtinct notion of it: But when Mr LOCKE ſpeaks of a power to revive in the mind thoſe ideas, which, after imprinting, have diſappeared, or have been, as it were, laid out of ſight, one would hardly know this to be memory, if he had not told us. There are other things which it ſeems to reſemble at leaſt as much. I ſee before me the picture of a friend. I ſhut my eyes, or turn them another way; and the picture diſappears, or is, as it were, laid out of ſight. I have a power to turn my eyes again towards the picture, and immediately the perception is revived. But is this memory? no ſurely; yet it anſwers the definition as well as memory itſelf can do.

We may obſerve, that the word perception is uſed by Mr LOCKE in too indefinite a way, as well as the word idea.

Perception, in the chapter upon that ſubject, is ſaid to be the firſt faculty of the mind exerciſed about our ideas. Here we are told that ideas are nothing but perceptions: Yet I apprehend it would ſound oddly to ſay, that perception is the firſt faculty of the mind exerciſed about perception; and ſtill more ſtrangely to ſay, that ideas are the firſt faculty of the mind exerciſed about our ideas. But why ſhould not ideas be a faculty as well as perception, if both are the ſame?

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Memory is ſaid to be a power to revive our perceptions. Will it not follow from this, that every thing that can be remembered is a perception? If this be ſo, it will be difficult to find any thing in nature but perceptions.

Our ideas, we are told, are nothing but actual perceptions; but in many places of the Eſſay, ideas are ſaid to be the objects of perception, and that the mind, in all its thoughts and reaſonings, has no other immediate object which it does or can contemplate but its own ideas. Does it not appear from this, either that Mr LOCKE held the operations of the mind to be the ſame thing with the objects of thoſe operations, or that he uſed the word idea ſometimes in one ſenſe and ſometimes in another, without any intimation, and probably without any apprehenſion of its ambiguity? It is an article of Mr HUME's philoſophy, that there is no diſtinction between the operations of the mind and their objects. But I ſee no reaſon to impute this opinion to Mr LOCKE. I rather think, that, notwithſtanding his great judgment and candour, his underſtanding was entangled by the ambiguity of the word idea, and that moſt of the imperfections of his Eſſay are owing to that cauſe.

Mr HUME ſaw farther into the conſequences of the common ſyſtem concerning ideas than any author had done before him. He ſaw the abſurdity of making every object of thought double, and ſplitting it into a remote object, which has a ſeparate and permanent exiſtence, and an immediate object, called an idea or impreſſion, which is an image of the former, and has no exiſtence, but when we are conſcious of it. According to this ſyſtem, we have no intercourſe with the external world, but by means of the internal world of ideas, which repreſents the other to the mind.

He ſaw it was neceſſary to reject one of theſe worlds as a fiction, and the queſtion was, Which ſhould be rejected? Whether all mankind, learned and unlearned, had feigned the exiſtence of the external world without good reaſon? or whether Philoſophers had

had feigned the internal world of ideas, in order to account for the intercourſe of the mind with the external? Mr HUME adopted the firſt of theſe opinions, and employed his reaſon and eloquence in ſupport of it. CHAP. VII.

Biſhop BERKELEY had gone ſo far in the ſame track as to reject the material world as fictitious; but it was left to Mr HUME to complete the ſyſtem.

According to his ſyſtem, therefore, impreſſions and ideas in his own mind are the only things a man can know, or can conceive: Nor are theſe ideas repreſentatives, as they were in the old ſyſtem. There is nothing elſe in nature, or at leaſt within the reach of our faculties, to be repreſented. What the vulgar call the perception of an external object, is nothing but a ſtrong impreſſion upon the mind. What we call the remembrance of a paſt event, is nothing but a preſent impreſſion or idea, weaker than the former. And what we call imagination, is ſtill a preſent idea, but weaker than that of memory.

That I may not do him injuſtice, theſe are his words in his Treatiſe of Human Nature, page 193.

"We find by experience, that when any impreſſion has been "preſent with the mind, it again makes its appearance there as an "idea; and this it may do after two different ways, either when "in its new appearance it retains a conſiderable degree of its firſt "vivacity, and is ſomewhat intermediate betwixt an impreſſion "and an idea, or when it entirely loſes that vivacity, and is a per-"fect idea. The faculty by which we repeat our impreſſions in "the firſt manner, is called the memory, and the other the ima-"gination."

Upon this account of memory and imagination I ſhall make ſome remarks.

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Firſt, I wiſh to know, what we are here to underſtand by experience? It is ſaid, we find all this by experience; and I conceive nothing can be meant by this experience but memory. Not that memory which our author defines, but memory in the common acceptation of the word. According to vulgar apprehenſion, memory is an immediate knowledge of ſomething paſt. Our author does not admit that there is any ſuch knowledge in the human mind. He maintains that memory is nothing but a preſent idea or impreſſion. But, in defining what he takes memory to be, he takes for granted that kind of memory which he rejects. For can we find by experience, that an impreſſion, after its firſt appearance to the mind, makes a ſecond, and a third, with different degrees of ſtrength and vivacity, if we have not ſo diſtinct a remembrance of its firſt appearance, as enables us to know it, upon its ſecond and third, notwithſtanding that, in the interval, it has undergone a very conſiderable change?

All experience ſuppoſes memory; and there can be no ſuch thing as experience, without truſting to our own memory, or that of others: So that it appears from Mr HUME's account of this matter, that he found himſelf to have that kind of memory, which he acknowledges and defines, by exerciſing that kind which he rejects.

Secondly, What is it we find by experience or memory? It is, "That when an impreſſion has been preſent with the mind, it "again makes its appearance there as an idea, and that after "two different ways."

If experience informs us of this, it certainly deceives us; for the thing is impoſſible, and the author ſhews it to be ſo. Impreſſions and ideas are fleeting periſhable things, which have no exiſtence, but when we are conſcious of them. If an impreſſion could make a ſecond and a third appearance to the mind, it muſt have a continued exiſtence during the interval of theſe appearances, which Mr

Mr HUME acknowledges to be a groſs abſurdity. It ſeems then, that we find, by experience, a thing which is impoſſible. We are impoſed upon by our experience, and made to believe contradictions.

Perhaps it may be ſaid, that theſe different appearances of the impreſſion are not to be underſtood literally, but figuratively; that the impreſſion is perſonified, and made to appear at different times, and in different habits, when no more is meant, but that an impreſſion appears at one time; afterwards a thing of a middle nature, between an impreſſion and an idea, which we call memory, and laſt of all a perfect idea, which we call imagination: that this figurative meaning agrees beſt with the laſt ſentence of the period, where we are told, that memory and imagination are faculties, whereby we repeat our impreſſions in a more or leſs lively manner. To repeat an impreſſion is a figurative way of ſpeaking, which ſignifies making a new impreſſion ſimilar to the former.

If, to avoid the abſurdity implied in the literal meaning, we underſtand the Philoſopher in this figurative one, then his definitions of memory and imagination, when ſtripped of the figurative dreſs, will amount to this, That memory is the faculty of making a weak impreſſion, and imagination the faculty of making an impreſſion ſtill weaker, after a correſponding ſtrong one. Theſe definitions of memory and imagination labour under two defects; *firſt*, That they convey no notion of the thing defined; and, *ſecondly*, That they may be applied to things of a quite different nature from thoſe that are defined.

When we are ſaid to have a faculty of making a weak impreſſion after a correſponding ſtrong one, it would not be eaſy to conjecture that this faculty is memory. Suppoſe a man ſtrikes his head ſmartly againſt the wall, this is an impreſſion; now he has a faculty by which he can repeat this impreſſion with leſs force, ſo as not to hurt him; this, by Mr HUME's account, muſt be memory.

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mory. He has a faculty by which he can juſt touch the wall with his head, ſo that the impreſſion entirely loſes its vivacity. This ſurely muſt be imagination; at leaſt it comes as near to the definition given of it by Mr HUME as any thing I can conceive.

Thirdly, We may obſerve, that when we are told that we have a faculty of repeating our impreſſions in a more or leſs lively manner, this implies that we are the efficient cauſes of our ideas of memory and imagination; but this contradicts what the author ſays a little before, where he proves, by what he calls a convincing argument, that impreſſions are the cauſe of their correſponding ideas. The argument that proves this had need indeed to be very convincing; whether we make the idea to be a ſecond appearance of the impreſſion, or a new impreſſion ſimilar to the former.

If the firſt be true, then the impreſſion is the cauſe of itſelf. If the ſecond, then the impreſſion after it is gone, and has no exiſtence, produces the idea. Such are the myſteries of Mr HUME's philoſophy.

It may be obſerved, that the common ſyſtem, that ideas are the only immediate objects of thought, leads to ſcepticiſm with regard to memory, as well as with regard to the objects of ſenſe, whether thoſe ideas are placed in the mind or in the brain.

Ideas are ſaid to be things internal and preſent, which have no exiſtence but during the moment they are in the mind. The objects of ſenſe are things external, which have a continued exiſtence. When it is maintained, that all that we immediately perceive is only ideas or phantaſms, how can we, from the exiſtence of thoſe phantaſms, conclude the exiſtence of an external world correſponding to them?

This difficult queſtion ſeems not to have occurred to the Peripatetics. DES CARTES ſaw the difficulty, and endeavoured to find out

out arguments by which, from the exiſtence of our phantaſms or ideas, we might infer the exiſtence of external objects. The ſame courſe was followed by MALEBRANCHE, ARNAULD, and LOCKE; but BERKELEY and HUME eaſily refuted all their arguments, and demonſtrated that there is no ſtrength in them.

The ſame difficulty with regard to memory naturally ariſes from the ſyſtem of ideas; and the only reaſon why it was not obſerved by Philoſophers, is, becauſe they give leſs attention to the memory than to the ſenſes: For ſince ideas are things preſent, how can we, from our having a certain idea preſently in our mind, conclude that an event really happened ten or twenty years ago correſponding to it?

There is the ſame need of arguments to prove, that the ideas of memory are pictures of things that really did happen, as that the ideas of ſenſe are pictures of external objects which now exiſt. In both caſes, it will be impoſſible to find any argument that has real weight. So that this hypotheſis leads us to abſolute ſcepticiſm, with regard to thoſe things which we moſt diſtinctly remember, no leſs than with regard to the external objects of ſenſe.

It does not appear to have occurred either to LOCKE or to BERKELEY, that their ſyſtem has the ſame tendency to overturn the teſtimony of memory as the teſtimony of the ſenſes.

Mr HUME ſaw farther than both, and found this conſequence of the ſyſtem of ideas perfectly correſponding to his aim of eſtabliſhing univerſal ſcepticiſm. His ſyſtem is therefore more conſiſtent than theirs, and the concluſions agree better with the premiſes.

But if we ſhould grant to Mr HUME, that our ideas of memory afford no juſt ground to believe the paſt exiſtence of things which we remember, it may ſtill be aſked, How it comes to paſs that perception and memory are accompanied with belief, while bare imagination is not? Though this belief cannot be juſtified upon his ſyſtem,

CHAP. VII. ſyſtem, it ought to be accounted for as a phænomenon of human nature.

This he has done, by giving us a new theory of belief in general; a theory which ſuits very well with that of ideas, and ſeems to be a natural conſequence of it, and which at the ſame time reconciles all the belief that we find in human nature to perfect ſcepticiſm.

What then is this belief? It muſt either be an idea, or ſome modification of an idea; we conceive many things which we do not believe. The idea of an object is the ſame whether we believe it to exiſt, or barely conceive it. The belief adds no new idea to the conception; it is therefore nothing but a modification of the idea of the thing believed, or a different manner of conceiving it. Hear himſelf:

" All the perceptions of the mind are of two kinds, impreſſions " and ideas, which differ from each other only in their different " degrees of force and vivacity. Our ideas are copied from our " impreſſions, and repreſent them in all their parts. When you " would vary the idea of a particular object, you can only increaſe " or diminiſh its force and vivacity: If you make any other " change upon it, it repreſents a different object or impreſſion. " The caſe is the ſame as in colours. A particular ſhade of any " colour may acquire a new degree of livelineſs or brightneſs, " without any other variation: But when you produce any other " variation, it is no longer the ſame ſhade or colour. So that as " belief does nothing but vary the manner in which we conceive " any object, it can only beſtow on our ideas an additional force " and vivacity. An opinion, therefore, or belief, may be moſt " accurately defined a lively idea, related to or aſſociated with a " preſent impreſſion."

This theory of belief is very fruitful of conſequences, which Mr HUME traces with his uſual acuteneſs, and brings into the ſervice

ſervice of his ſyſtem. A great part of his ſyſtem indeed is built upon it; and it is of itſelf ſufficient to prove what he calls his hypotheſis, "that belief is more properly an act of the ſenſitive than of the cogitative part of our natures." CHAP. VII.

It is very difficult to examine this account of belief with the ſame gravity with which it is propoſed. It puts one in mind of the ingenious account given by MARTINUS SCRIBLERUS of the power of ſyllogiſm, by making the *major* the male, and the *minor* the female, which being coupled by the middle *term*, generate the concluſion. There is ſurely no ſcience in which men of great parts and ingenuity have fallen into ſuch groſs abſurdities as in treating of the powers of the mind. I cannot help thinking, that never any thing more abſurd was gravely maintained by any Philoſopher, than this account of the nature of belief, and of the diſtinction of perception, memory, and imagination.

The belief of a propoſition is an operation of mind of which every man is conſcious, and what it is he underſtands perfectly, though, on account of its ſimplicity, he cannot give a logical definition of it. If he compares it with ſtrength or vivacity of his ideas, or with any modification of ideas, they are ſo far from appearing to be one and the ſame, that they have not the leaſt ſimilitude.

That a ſtrong belief and a weak belief differ only in degree, I can eaſily comprehend; but that belief and no belief ſhould differ only in degree, no man can believe who underſtands what he ſpeaks: For this is in reality to ſay that ſomething and nothing differ only in degree, or that nothing is a degree of ſomething.

Every propoſition that may be the object of belief, has a contrary propoſition that may be the object of a contrary belief. The ideas of both, according to Mr HUME, are the ſame, and differ only in degrees of vivacity. That is, contraries differ only in degree; and ſo pleaſure may be a degree of pain, and

CHAP. VII. hatred a degree of love. But it is to no purpoſe to trace the abſurdities that follow from this doctrine, for none of them can be more abſurd than the doctrine itſelf.

Every man knows perfectly what it is to ſee an object with his eyes, what it is to remember a paſt event, and what it is to conceive a thing which has no exiſtence. That theſe are quite different operations of his mind, he is as certain as that ſound differs from colour, and both from taſte; and I can as eaſily believe that ſound, and colour, and taſte, differ only in degree, as that ſeeing, and remembering, and imagining, differ only in degree.

Mr HUME, in the third volume of his Treatiſe of Human Nature, is ſenſible that his theory of belief is liable to ſtrong objections, and ſeems, in ſome meaſure, to retract it; but in what meaſure, it is not eaſy to ſay. He ſeems ſtill to think that belief is only a modification of the idea, but that vivacity is not a proper term to expreſs that modification. Inſtead of it he uſes ſome analogical phraſes to explain that modification, ſuch as "apprehending the idea more ſtrongly, or taking faſter hold of it."

There is nothing more meritorious in a Philoſopher than to retract an error upon conviction; but in this inſtance I humbly apprehend Mr HUME claims that merit upon too ſlight a ground: For I cannot perceive that the apprehending an idea more ſtrongly, or taking faſter hold of it, expreſſes any other modification of the idea than what was before expreſſed by its ſtrength and vivacity, or even that it expreſſes the ſame modification more properly. Whatever modification of the idea he makes belief to be, whether its vivacity, or ſome other without a name, to make perception, memory, and imagination, to be the different degrees of that modification, is chargeable with the abſurdities we have mentioned.

Before we leave this ſubject of memory, it is proper to take notice of a diſtinction which ARISTOTLE makes between memo-

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ry and reminiſcence, becauſe the diſtinction has a real foundation in nature, though in our language I think we do not diſtinguiſh them by different names.

Memory is a kind of habit which is not always in exerciſe with regard to things we remember, but is ready to ſuggeſt them when there is occaſion. The moſt perfect degree of this habit is, when the thing preſents itſelf to our remembrance ſpontaneouſly, and without labour, as often as there is occaſion. A ſecond degree is, when the thing is forgot for a longer or ſhorter time, even when there is occaſion to remember it, yet at laſt ſome incident brings it to mind without any ſearch. A third degree is, when we caſt about and ſearch for what we would remember, and ſo at laſt find it out. It is this laſt, I think, which ARISTOTLE calls reminiſcence, as diſtinguiſhed from memory.

Reminiſcence, therefore, includes a will to recollect ſomething paſt, and a ſearch for it. But here a difficulty occurs. It may be ſaid, that what we will to remember we muſt conceive, as there can be no will without a conception of the thing willed. A will to remember a thing, therefore, ſeems to imply that we remember it already, and have no occaſion to ſearch for it. But this difficulty is eaſily removed. When we will to remember a thing, we muſt remember ſomething relating to it, which gives us a relative conception of it; but we may, at the ſame time, have no conception what the thing is, but only what relation it bears to ſomething elſe. Thus, I remember that a friend charged me with a commiſſion to be executed at ſuch a place; but I have forgot what the commiſſion was. By applying my thought to what I remember concerning it, that it was given by ſuch a perſon, upon ſuch an occaſion, in conſequence of ſuch a converſation, I am led, in a train of thought, to the very thing I had forgot, and recollect diſtinctly what the commiſſion was.

ARISTOTLE ſays, that brutes have not reminiſcence, and this I

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think is probable; but, ſays he, they have memory. It cannot, indeed, be doubted but they have ſomething very like to it, and in ſome inſtances in a very great degree. A dog knows his maſter after long abſence. A horſe will trace back a road he has once gone as accurately as a man; and this is the more ſtrange, that the train of thought which he had in going muſt be reverſed in his return. It is very like to ſome prodigious memories we read of, where a perſon, upon hearing an hundred names or unconnected words pronounced, can begin at the laſt, and go backwards to the firſt, without loſing or miſplacing one. Brutes certainly may learn much from experience, which ſeems to imply memory.

Yet I ſee no reaſon to think that brutes meaſure time as men do, by days, months, or years, or that they have any diſtinct knowledge of the interval between things which they remember, or of their diſtance from the preſent moment. If we could not record tranſactions according to their dates, human memory would be ſomething very different from what it is, and perhaps reſemble more the memory of brutes.

ESSAY

ESSAY IV.

OF CONCEPTION.

CHAP. I.

Of Conception, or ſimple Apprehenſion in General.

CONCEIVING, imagining, apprehending, underſtanding, having a notion of a thing, are common words uſed to expreſs that operation of the underſtanding, which the Logicians call *ſimple apprehenſion.* The having an idea of a thing, is in common language uſed in the ſame ſenſe, chiefly I think ſince Mr LOCKE's time.

Logicians define ſimple apprehenſion to be the bare conception of a thing without any judgment or belief about it. If this were intended for a ſtrictly logical definition, it might be a juſt objection to it, that conception and apprehenſion are only ſynonymous words; and that we may as well define conception by apprehenſion, as apprehenſion by conception; but it ought to be remembered, that the moſt ſimple operations of the mind cannot be logically defined. To have a diſtinct notion of them, we muſt attend to them as we feel them in our own minds. He that would have a diſtinct notion of a ſcarlet colour, will never attain it by a definition; he muſt ſet it before his eye, attend to it, compare it with the colours that come neareſt to it, and obſerve the ſpecific difference, which he will in vain attempt to define.

Every

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Every man is conſcious that he can conceive a thouſand things, of which he believes nothing at all; as a horſe with wings, a mountain of gold; but although conception may be without any degree of belief, even the ſmalleſt belief cannot be without conception. He that believes, muſt have ſome conception of what he believes.

Without attempting a definition of this operation of the mind, I ſhall endeavour to explain ſome of its properties; conſider the theories about it; and take notice of ſome miſtakes of Philoſophers concerning it.

1. It may be obſerved, that conception enters as an ingredient in every operation of the mind: Our ſenſes cannot give us the belief of any object, without giving ſome conception of it at the ſame time: No man can either remember or reaſon about things of which he hath no conception: When we will to exert any of our active powers, there muſt be ſome conception of what we will to do: There can be no deſire nor averſion, love nor hatred, without ſome conception of the object: We cannot feel pain without conceiving it, though we can conceive it without feeling it. Theſe things are ſelf-evident.

In every operation of the mind therefore, in every thing we call thought there muſt be conception: When we analyſe the various operations either of the underſtanding or of the will, we ſhall always find this at the bottom, like the *caput mortuum* of the Chemiſts, or the *materia prima* of the Peripatetics; but though there is no operation of mind without conception, yet it may be found naked, detached from all others, and then it is called ſimple apprehenſion, or the bare conception of a thing.

As all the operations of our mind are expreſſed by language, every one knows, that it is one thing to underſtand what is ſaid, to conceive or apprehend its meaning, whether it be a word, a ſentence, or a diſcourſe; it is another thing to judge of it, to aſſent or

or diſſent, to be perſuaded or moved. The firſt is ſimple apprehenſion, and may be without the laſt, but the laſt cannot be without the firſt.

2. In bare conception there can neither be truth nor falſehood, becauſe it neither affirms nor denies. Every judgment, and every propoſition by which judgment is expreſſed, muſt be true or falſe; and the qualities of true and falſe, in their proper ſenſe, can belong to nothing but to judgments, or to propoſitions which expreſs judgment. In the bare conception of a thing there is no judgment, opinion, or belief included, and therefore it cannot be either true or falſe.

But it may be ſaid, Is there any thing more certain than that men may have true or falſe conceptions, true or falſe apprehenſions, of things? I anſwer, That ſuch ways of ſpeaking are indeed ſo common, and ſo well authoriſed by cuſtom, the arbiter of language, that it would be preſumption to cenſure them. It is hardly poſſible to avoid uſing them. But we ought to be upon our guard that we be not miſled by them, to confound things, which, though often expreſſed by the ſame words, are really different. We muſt therefore remember what was before obſerved, Eſſay I. chap. 1. That all the words, by which we ſignify the bare conception of a thing, are likewiſe uſed to ſignify our opinions, when we wiſh to expreſs them with modeſty and diffidence. And we ſhall always find, that, when we ſpeak of true or falſe conceptions, we mean true or falſe opinions. An opinion, though ever ſo wavering, or ever ſo modeſtly expreſſed, muſt be either true or falſe; but a bare conception, which expreſſes no opinion or judgment, can be neither.

If we analyſe thoſe ſpeeches, in which men attribute truth or falſehood to our conceptions of things, we ſhall find in every caſe, that there is ſome opinion or judgment implied in what they call conception. A child conceives the moon to be flat, and a foot or

two

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two broad; that is, this is his opinion: And when we ſay it is a falſe notion, or a falſe conception, we mean that it is a falſe opinion. He conceives the city of London to be like his country village; that is, he believes it to be ſo, till he is better inſtructed. He conceives a lion to have horns; that is, he believes that the animal which men call a lion, has horns. Such opinions language authoriſes us to call conceptions; and they may be true or falſe. But bare conception, or what the Logicians call ſimple apprehenſion, implies no opinion, however ſlight, and therefore can neither be true nor falſe.

What Mr LOCKE ſays of ideas (by which word he very often means nothing but conceptions) is very juſt, when the word idea is ſo underſtood, book 2. chap. 32. § 1. "Though truth and falſe-"hood belong in propriety of ſpeech only to propoſitions, yet ideas "are often termed true or falſe (as what words are there that are "not uſed with great latitude, and with ſome deviation from their "ſtrict and proper ſignification); though I think, that when ideas "themſelves are termed true or falſe, there is ſtill ſome ſecret or "tacit propoſition, which is the foundation of that denomination; "as we ſhall ſee, if we examine the particular occaſions wherein "they come to be called true or falſe; in all which we ſhall find "ſome kind of affirmation or negation, which is the reaſon of "that denomination: For our ideas being nothing but bare ap-"pearances, or perceptions in our minds, cannot properly and "ſimply in themſelves be ſaid to be true or falſe, no more than a "ſimple name of any thing can be ſaid to be true or falſe."

It may be here obſerved by the way, that in this paſſage, as in many others, Mr LOCKE uſes the word *perception*, as well as the word *idea*, to ſignify what I call conception, or ſimple apprehenſion. And in his chapter upon perception, book 2. chap. 9. he uſes it in the ſame ſenſe. Perception, he ſays, "as it is the firſt "faculty of the mind, exerciſed about our ideas; ſo it is the firſt "and ſimpleſt idea we have from reflection, and is by ſome called thinking

" thinking in general. It ſeems to be that which puts the diſtinc-
" tion betwixt the animal kingdom and the inferior parts of na-
" ture. It is the firſt operation of all our faculties, and the inlet
" of all knowledge into our minds."

Mr LOCKE has followed the example given by DES CARTES, GASSENDI, and other Carteſians, in giving the name of *perception* to the bare conception of things: And he has been followed in this by Biſhop BERKELEY, Mr HUME, and many late Philoſophers, when they treat of ideas. They have probably been led into this impropriety, by the common doctrine concerning ideas, which teaches us, that conception, perception by the ſenſes, and memory, are only different ways of perceiving ideas in our own minds. If that theory be well founded, it will indeed be very difficult to find any ſpecific diſtinction between conception and perception. But there is reaſon to diſtruſt any philoſophical theory, when it leads men to corrupt language, and to confound, under one name, operations of the mind, which common ſenſe and common language teach them to diſtinguiſh.

I grant that there are ſome ſtates of the mind, wherein a man may confound his conceptions with what he perceives or remembers, and miſtake the one for the other; as, in the delirium of a fever, in ſome caſes of lunacy and of madneſs, in dreaming, and perhaps in ſome momentary tranſports of devotion, or of other ſtrong emotions, which cloud his intellectual faculties, and for a time carry a man out of himſelf, as we uſually expreſs it.

Even in a ſober and ſound ſtate of mind, the memory of a thing may be ſo very weak, that we may be in doubt whether we only dreamed or imagined it.

It may be doubted, whether children, when their imagination firſt begins to work, can diſtinguiſh what they barely conceive from what they remember. I have been told by a man of knowledge and ob-

 ſervation,

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ſervation, that one of his ſons, when he began to ſpeak, very often told lies with great aſſurance, without any intention, as far as appeared, or any conſciouſneſs of guilt. From which the father concluded, that it is natural to ſome children to lie. I am rather inclined to think, that the child had no intention to deceive, but miſtook the rovings of his own fancy, for things which he remembered. This, however, I take to be very uncommon, after children can communicate their ſentiments by language, though perhaps not ſo in a more early period.

Granting all this, if any man will affirm, that they whoſe intellectual faculties are ſound, and ſober, and ripe, cannot with certainty diſtinguiſh what they perceive or remember, from what they barely conceive, when thoſe operations have any degree of ſtrength and diſtinctneſs, he may enjoy his opinion; I know not how to reaſon with him. Why ſhould Philoſophers confound thoſe operations in treating of ideas, when they would be aſhamed to do it on other occaſions? To diſtinguiſh the various powers of our minds, a certain degree of underſtanding is neceſſary: And if ſome, through a defect of underſtanding, natural or accidental, or from unripeneſs of underſtanding, may be apt to confound different powers, will it follow that others cannot clearly diſtinguiſh them?

To return from this digreſſion, into which the abuſe of the word perception, by Philoſophers, has led me, it appears evident, that the bare conception of an object, which includes no opinion or judgment, can neither be true nor falſe. Thoſe qualities, in their proper ſenſe, are altogether inapplicable to this operation of the mind.

3. Of all the analogies between the operations of body and thoſe of the mind, there is none ſo ſtrong and ſo obvious to all mankind as that which there is between painting, or other plaſtic arts, and the power of conceiving objects in the mind. Hence in all languages, the words, by which this power of the mind and its various modifications are expreſſed, are analogical, and borrowed from

from thoſe arts. We conſider this power of the mind as a plaſtic power, by which we form to ourſelves images of the objects of thought.

In vain ſhould we attempt to avoid this analogical language, for we have no other language upon the ſubject; yet it is dangerous, and apt to miſlead. All analogical and figurative words have a double meaning; and, if we are not very much upon our guard, we ſlide inſenſibly from the borrowed and figurative meaning into the primitive. We are prone to carry the parallel between the things compared farther than it will hold, and thus very naturally to fall into error.

To avoid this as far as poſſible in the preſent ſubject, it is proper to attend to the diſſimilitude between conceiving a thing in the mind, and painting it to the eye, as well as to their ſimilitude. The ſimilitude ſtrikes and gives pleaſure. The diſſimilitude we are leſs diſpoſed to obſerve. But the Philoſopher ought to attend to it, and to carry it always in mind, in his reaſonings on this ſubject, as a monitor, to warn him againſt the errors into which the analogical language is apt to draw him.

When a man paints, there is ſome work done, which remains when his hand is taken off, and continues to exiſt, though he ſhould think no more of it. Every ſtroke of his pencil produces an effect, and this effect is different from his action in making it; for it remains and continues to exiſt when the action ceaſes. The action of painting is one thing, the picture produced is another thing. The firſt is the cauſe, the ſecond is the effect.

Let us next conſider what is done when he only conceives this picture. He muſt have conceived it before he painted it: For this is a maxim univerſally admitted, that every work of art muſt firſt be conceived in the mind of the operator. What is this conception? it is an act of the mind, a kind of thought. This cannot

CHAP. I. be denied. But does it produce any effect beſides the act itſelf? Surely common ſenſe anſwers this queſtion in the negative: For every one knows, that it is one thing to conceive, another thing to bring forth into effect. It is one thing to project, another to execute. A man may think for a long time what he is to do, and after all do nothing. Conceiving as well as projecting or reſolving, are what the ſchoolmen called *immanent* acts of the mind, which produce nothing beyond themſelves. But painting is a tranſitive act, which produces an effect diſtinct from the operation, and this effect is the picture. Let this therefore be always remembered, that what is commonly called the image of a thing in the mind, is no more than the act or operation of the mind in conceiving it.

That this is the common ſenſe of men who are untutored by philoſophy, appears from their language. If one ignorant of the language ſhould aſk, What is meant by conceiving a thing? we ſhould very naturally anſwer, That it is having an image of it in the mind; and perhaps we could not explain the word better. This ſhows, that conception, and the image of a thing in the mind, are ſynonymous expreſſions. The image in the mind, therefore, is not the object of conception, nor is it any effect produced by conception as a cauſe. It is conception itſelf. That very mode of thinking, which we call conception, is by another name called an image in the mind.

Nothing more readily gives the conception of a thing than the ſeeing an image of it. Hence, by a figure common in language, conception is called an image of the thing conceived. But to ſhow that it is not a real but a metaphorical image, it is called an image in the mind. We know nothing that is properly in the mind but thought; and when any thing elſe is ſaid to be in the mind, the expreſſion muſt be figurative, and ſignify ſome kind of thought.

I know that Philoſophers very unanimouſly maintain, that in conception there is a real image in the mind, which is the immediate

diate object of conception, and distinct from the act of conceiving it. I beg the reader's indulgence to defer what may be said for or against this philosophical opinion to the next chapter; intending in this only to explain what appears to me to belong to this operation of mind, without considering the theories about it. I think it appears from what has been said, that the common language of those who have not imbibed any philosophical opinion upon this subject, authorises us to understand *the conception of a thing, and an image of it in the mind*, not as two different things, but as two different expressions, to signify one and the same thing; and I wish to use common words in their common acceptation.

4. Taking along with us what is said in the last article, to guard us against the seduction of the analogical language used on this subject, we may observe a very strong analogy, not only between conceiving and painting in general, but between the different kinds of our conceptions, and the different works of the painter. He either makes fancy pictures, or he copies from the painting of others, or he paints from the life; that is, from real objects of art or nature which he has seen. I think our conceptions admit of a division very similar.

First, There are conceptions which may be called fancy pictures. They are commonly called creatures of fancy, or of imagination. They are not the copies of any original that exists, but are originals themselves. Such was the conception which SWIFT formed of the island of Laputa and of the country of the Lilliputians; CERVANTES of DON QUIXOTE and his Squire; HARRINGTON of the government of Oceana; and Sir THOMAS MORE of that of Utopia. We can give names to such creatures of imagination, conceive them distinctly, and reason consequentially concerning them, though they never had an existence. They were conceived by their creators, and may be conceived by others, but they never existed. We do not ascribe the qualities of true or false to them, because

CHAP. I. becauſe they are not accompanied with any belief, nor do they imply any affirmation or negation.

Setting aſide thoſe creatures of imagination, there are other conceptions, which may be called copies, becauſe they have an original or archetype to which they refer, and with which they are believed to agree; and we call them true or falſe conceptions, according as they agree or diſagree with the ſtandard to which they are referred. Theſe are of two kinds, which have different ſtandards or originals.

The *firſt* kind is analogous to pictures taken from the life. We have conceptions of individual things that really exiſt, ſuch as the city of London, or the government of Venice. Here the things conceived are the originals; and our conceptions are called true when they agree with the thing conceived. Thus, my conception of the city of London is true when I conceive it to be what it really is.

Individual things which really exiſt, being the creatures of God, (though ſome of them may receive their outward form from man), he only who made them knows their whole nature; we know them but in part, and therefore our conceptions of them muſt in all caſes be imperfect and inadequate; yet they may be true and juſt, as far as they reach.

The *ſecond* kind is analogous to the copies which the painter makes from pictures done before. Such I think are the conceptions we have of what the ancients called univerſals; that is, of things which belong or may belong to many individuals. Theſe are kinds and ſpecies of things; ſuch as, man or elephant, which are ſpecies of ſubſtances; wiſdom or courage, which are ſpecies of qualities; equality or ſimilitude, which are ſpecies of relations. It may be aſked, From what original are theſe conceptions formed? And when are they ſaid to be true or falſe?

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It appears to me, that the original from which they are copied, that is, the thing conceived, is the conception or meaning which other men who underſtand the language affix to the ſame words.

Things are parcelled into kinds and ſorts, not by Nature, but by men. The individual things we are connected with, are ſo many, that to give a proper name to every individual would be impoſſible. We could never attain the knowledge of them that is neceſſary, nor converſe and reaſon about them, without ſorting them according to their different attributes. Thoſe that agree in certain attributes are thrown into one parcel, and have a general name given them, which belongs equally to every individual in that parcel. This common name muſt therefore ſignify thoſe attributes which have been obſerved to be common to every individual in that parcel, and nothing elſe.

That ſuch general words may anſwer their intention, all that is neceſſary is, that thoſe who uſe them ſhould affix the ſame meaning or notion, that is, the ſame conception to them. The common meaning is the ſtandard by which ſuch conceptions are formed, and they are ſaid to be true or falſe, according as they agree or diſagree with it. Thus, my conception of felony is true and juſt, when it agrees with the meaning of that word in the laws relating to it, and in authors who underſtand the law. The meaning of the word is the thing conceived; and that meaning is the conception affixed to it by thoſe who beſt underſtand the language.

An individual is expreſſed in language either by a proper name, or by a general word joined to ſuch circumſtances as diſtinguiſh that individual from all others; if it is unknown, it may, when an object of ſenſe and within reach, be pointed out to the ſenſes; when beyond the reach of the ſenſes, it may be aſcertained by a deſcription, which, though very imperfect, may be true and ſufficient to diſtinguiſh it from every other individual. Hence it is, that,

CHAP. I. that, in ſpeaking of individuals, we are very little in danger of miſtaking the object, or taking one individual for another.

Yet, as was before obſerved, our conception of them is always inadequate and lame. They are the creatures of God, and there are many things belonging to them which we know not, and which cannot be deduced by reaſoning from what we know: They have a real eſſence, or conſtitution of nature, from which all their qualities flow; but this eſſence our faculties do not comprehend: They are therefore incapable of definition; for a definition ought to comprehend the whole nature or eſſence of the thing defined.

Thus, Weſtminſter bridge is an individual object; though I had never ſeen or heard of it before, if I am only made to conceive that it is a bridge from Weſtminſter over the Thames, this conception, however imperfect, is true, and is ſufficient to make me diſtinguiſh it, when it is mentioned, from every other object that exiſts. The architect may have an adequate conception of its ſtructure, which is the work of man; but of the materials which are the work of God, no man has an adequate conception; and therefore, though the object may be deſcribed, it cannot be defined.

Univerſals are always expreſſed by general words; and all the words of language, excepting proper names, are general words; they are the ſigns of general conceptions, or of ſome circumſtance relating to them. Theſe general conceptions are formed for the purpoſe of language and reaſoning; and the object from which they are taken, and to which they are intended to agree, is the conception which other men join to the ſame words; they may therefore be adequate, and perfectly agree with the thing conceived. This implies no more than that men who ſpeak the ſame language may perfectly agree in the meaning of many general words.

Thus Mathematicians have conceived what they call a plane triangle: They have defined it accurately; and when I conceive it

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to be a plane ſurface, bounded by three right lines, I have both a true and an adequate conception of it. There is nothing belonging to a plane triangle which is not comprehended in this conception of it, or deducible from it by juſt reaſoning. This definition expreſſes the whole eſſence of the thing defined, as every juſt definition ought to do; but this eſſence is only what Mr LOCKE very properly calls a nominal eſſence; it is a general conception formed by the mind, and joined to a general word as its ſign.

If all the general words of a language had a preciſe meaning, and were perfectly underſtood, as mathematical terms are, all verbal diſputes would be at an end, and men would never ſeem to differ in opinion, but when they differ in reality; but this is far from being the caſe. The meaning of moſt general words is not learned like that of mathematical terms, by an accurate definition, but by the experience we happen to have, by hearing them uſed in converſation. From ſuch experience we collect their meaning by a kind of induction; and as this induction is for the moſt part lame and imperfect, it happens that different perſons join different conceptions to the ſame general word; and though we intend to give them the meaning which uſe, the arbiter of language, has put upon them, this is difficult to find, and apt to be miſtaken, even by the candid and attentive. Hence, in innumerable diſputes, men do not really differ in their judgments, but in the way of expreſſing them.

Our conceptions, therefore, appear to be of three kinds: They are either the conceptions of individual things, the creatures of God; or they are conceptions of the meaning of general words; or they are the creatures of our own imagination; and theſe different kinds have different properties which we have endeavoured to deſcribe.

5. Our conception of things may be ſtrong and lively, or it may be faint and languid in all degrees. Theſe are qualities which properly belong to our conceptions, though we have no names for

CHAP. I. them but ſuch as are analogical. Every man is conſcious of ſuch a difference in his conceptions, and finds his lively conceptions moſt agreeable, when the object is not of ſuch a nature as to give pain.

Thoſe who have lively conceptions, commonly expreſs them in a lively manner, that is, in ſuch a manner as to raiſe lively conceptions and emotions in others. Such perſons are the moſt agreeable companions in converſation, and the moſt acceptable in their writings.

The livelineſs of our conceptions proceeds from different cauſes. Some objects from their own nature, or from accidental aſſociations, are apt to raiſe ſtrong emotions in the mind. Joy and hope, ambition, zeal, and reſentment, tend to enliven our conceptions: Diſappointment, diſgrace, grief, and envy, tend rather to flatten them. Men of keen paſſions are commonly lively and agreeable in converſation; and diſpaſſionate men often make dull companions: There is in ſome men a natural ſtrength and vigour of mind, which gives ſtrength to their conceptions on all ſubjects, and in all the occaſional variations of temper.

It ſeems eaſier to form a lively conception of objects that are familiar, than of thoſe that are not; our conceptions of viſible objects are commonly the moſt lively, when other circumſtances are equal: Hence Poets not only delight in the deſcription of viſible objects, but find means by metaphor, analogy, and alluſion, to clothe every object they deſcribe with viſible qualities: The lively conception of theſe makes the object appear, as it were, before our eyes. Lord KAMES, in his Elements of Criticiſm, has ſhewn of what importance it is in works of taſte, to give to objects deſcribed, what he calls *ideal preſence*. To produce this in the mind, is indeed the capital aim of poetical and rhetorical deſcription. It carries the man, as it were, out of himſelf, and makes him a ſpectator of the ſcene deſcribed. This ideal preſence ſeems to me to be nothing elſe but a lively conception of the appearance which the object would make if really preſent to the eye.

Abſtract

Abſtract and general conceptions are never lively, though they may be diſtinct; and therefore, however neceſſary in philoſophy, ſeldom enter into poetical deſcription, without being particulariſed or clothed in ſome viſible dreſs.

It may be obſerved, however, that our conceptions of viſible objects become more lively by giving them motion, and more ſtill by giving them life, and intellectual qualities. Hence in poetry, the whole creation is animated, and endowed with ſenſe and reflection.

Imagination, when it is diſtinguiſhed from conception, ſeems to me to ſignify one ſpecies of conception; to wit, the conception of viſible objects. Thus, in a mathematical propoſition, I imagine the figure, and I conceive the demonſtration; it would not I think be improper to ſay, I conceive both; but it would not be ſo proper to ſay, I imagine the demonſtration.

6. Our conceptions of things may be clear, diſtinct, and ſteady; or they may be obſcure, indiſtinct, and wavering. The livelineſs of our conceptions gives pleaſure, but it is their diſtinctneſs and ſteadineſs that enables us to judge right, and to expreſs our ſentiments with perſpicuity.

If we enquire into the cauſe, why among perſons ſpeaking or writing on the ſame ſubject, we find in one ſo much darkneſs, in another ſo much perſpicuity; I believe the chief cauſe will be found to be, that one had a diſtinct and ſteady conception of what he ſaid or wrote, and the other had not: Men generally find means to expreſs diſtinctly what they have conceived diſtinctly. HORACE obſerves, that proper words ſpontaneouſly follow diſtinct conceptions. "*Verbaque proviſam rem non invita ſequuntur.*" But it is impoſſible that a man ſhould diſtinctly expreſs what he has not diſtinctly conceived.

We are commonly taught that perſpicuity depends upon a pro-

CHAP. I. per choice of words, a proper ſtructure of ſentences, and a proper order in the whole compoſition. All this is very true, but it ſuppoſes diſtinctneſs in our conceptions, without which there can be neither propriety in our words, nor in the ſtructure of our ſentences, nor in our method.

Nay, I apprehend, that indiſtinct conceptions of things are, for the moſt part, the cauſe not only of obſcurity in writing and ſpeaking, but of error in judging.

Muſt not they who conceive things in the ſame manner form the ſame judgment of their agreements and diſagreements? Is it poſſible for two perſons to differ with regard to the concluſion of a ſyllogiſm who have the ſame conception of the premiſes?

Some perſons find it difficult to enter into a mathematical demonſtration. I believe we ſhall always find the reaſon to be, that they do not diſtinctly apprehend it. A man cannot be convinced by what he does not underſtand. On the other hand, I think a man cannot underſtand a demonſtration without ſeeing the force of it. I ſpeak of ſuch demonſtrations as thoſe of EUCLID, where every ſtep is ſet down, and nothing left to be ſupplied by the reader.

Sometimes one who has got through the firſt four books of EUCLID's Elements, and ſees the force of the demonſtrations, finds difficulty in the fifth. What is the reaſon of this? You may find, by a little converſation with him, that he has not a clear and ſteady conception of ratios and of the terms relating to them. When the terms uſed in the fifth book have become familiar, and readily excite in his mind a clear and ſteady conception of their meaning, you may venture to affirm that he will be able to underſtand the demonſtrations of that book, and to ſee the force of them.

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If this be really the caſe, as it ſeems to be, it leads us to think that men are very much upon a level with regard to mere judgment, when we take that faculty apart from the apprehenſion or conception of the things about which we judge; ſo that a ſound judgment ſeems to be the inſeparable companion of a clear and ſteady apprehenſion: And we ought not to conſider theſe two as talents, of which the one may fall to the lot of one man, and the other to the lot of another, but as talents which always go together.

It may, however, be obſerved, that ſome of our conceptions may be more ſubſervient to reaſoning than others which are equally clear and diſtinct. It was before obſerved, that ſome of our conceptions are of individual things, others of things general and abſtract. It may happen, that a man who has very clear conceptions of things individual, is not ſo happy in thoſe of things general and abſtract. And this I take to be the reaſon why we find men who have good judgment in matters of common life, and perhaps good talents for poetical or rhetorical compoſition, who find it very difficult to enter into abſtract reaſoning.

That I may not appear ſingular in putting men ſo much upon a level in point of mere judgment, I beg leave to ſupport this opinion by the authority of two very thinking men, DES CARTES and CICERO. The former, in his diſſertation on method, expreſſes himſelf to this purpoſe: "Nothing is ſo equally diſtributed among men as judgment. Wherefore it ſeems reaſonable to believe, that the power of diſtinguiſhing what is true from what is falſe, (which we properly call judgment or right reaſon), is by nature equal in all men; and therefore that the diverſity of our opinions does not ariſe from one perſon being endowed with a greater power of reaſon than another, but only from this, that we do not lead our thoughts in the ſame track, nor attend to the ſame things."

CICERO, in his third book De Oratore, makes this obſervation, "It is wonderful, when the learned and unlearned differ ſo much in

CHAP. I. in art, how little they differ in judgment. For art being derived from Nature, is good for nothing, unleſs it move and delight Nature."

From what has been ſaid in this article, it follows, that it is ſo far in our power to write and ſpeak perſpicuouſly, and to reaſon juſtly, as it is in our power to form clear and diſtinct conceptions of the ſubject on which we ſpeak or reaſon. And though Nature hath put a wide difference between one man and another in this reſpect, yet that it is in a very conſiderable degree in our power to have clear and diſtinct apprehenſions of things about which we think and reaſon, cannot be doubted.

7. It has been obſerved by many authors, that, when we barely conceive any object, the ingredients of that conception muſt either be things with which we were before acquainted by ſome other original power of the mind, or they muſt be parts or attributes of ſuch things. Thus a man cannot conceive colours, if he never ſaw, nor ſounds, if he never heard. If man had not a conſcience, he could not conceive what is meant by moral obligation, or by right and wrong in conduct.

Fancy may combine things that never were combined in reality. It may enlarge or diminiſh, multiply or divide, compound and faſhion the objects which Nature preſents; but it cannot, by the utmoſt effort of that creative Power which we aſcribe to it, bring any one ſimple ingredient into its productions, which Nature has not framed, and brought to our knowledge by ſome other faculty.

This Mr LOCKE has expreſſed as beautifully as juſtly. The dominion of man, in this little world of his own underſtanding, is much the ſame as in the great world of viſible things; wherein his power, however managed by art and ſkill, reaches no farther than to compound and divide the materials that are made to his hand, but can do nothing towards making the leaſt particle of matter

ter, or deſtroying one atom that is already in being. The ſame inability will every one find in himſelf, to faſhion in his underſtanding any ſimple idea not received by the powers which God has given him.

I think all Philoſophers agree in this ſentiment. Mr HUME, indeed, after acknowledging the truth of the principle in general, mentions what he thinks a ſingle exception to it. That a man, who had ſeen all the ſhades of a particular colour except one, might frame in his mind a conception of that ſhade which he never ſaw. I think this is not an exception; becauſe a particular ſhade of a colour differs not ſpecifically, but only in degree, from other ſhades of the ſame colour.

It is proper to obſerve, that our moſt ſimple conceptions are not thoſe which Nature immediately preſents to us. When we come to years of underſtanding, we have the power of analyſing the objects of Nature, of diſtinguiſhing their ſeveral attributes and relations, of conceiving them one by one, and of giving a name to each, whoſe meaning extends only to that ſingle attribute or relation: And thus our moſt ſimple conceptions are not thoſe of any object in nature, but of ſome ſingle attribute or relation of ſuch objects.

Thus Nature preſents to our ſenſes, bodies that are extended in three dimenſions, and ſolid. By analyſing the notion we have of body from our ſenſes, we form to ourſelves the conceptions of extenſion, ſolidity, ſpace, a point, a line, a ſurface; all which are more ſimple conceptions than that of a body. But they are the elements, as it were, of which our conception of a body is made up, and into which it may be analyſed. This power of analyſing objects we propoſe to conſider particularly in another place. It is only mentioned here, that what is ſaid in this article may not be underſtood, ſo as to be inconſiſtent with it.

8. Though

CHAP. I.

8. Though our conceptions muſt be confined to the ingredients mentioned in the laſt article, we are unconfined with regard to the arrangement of thoſe ingredients. Here we may pick and chuſe, and form an endleſs variety of combinations and compoſitions, which we call creatures of the imagination. Theſe may be clearly conceived, though they never exiſted: And indeed every thing that is made, muſt have been conceived before it was made. Every work of human art, and every plan of conduct, whether in public or in private life, muſt have been conceived before it is brought to execution. And we cannot avoid thinking, that the Almighty, before he created the univerſe by his power, had a diſtinct conception of the whole and of every part, and ſaw it to be good, and agreeable to his intention.

It is the buſineſs of man, as a rational creature, to employ this unlimited power of conception, for planning his conduct and enlarging his knowledge. It ſeems to be peculiar to beings endowed with reaſon to act by a preconceived plan. Brute animals ſeem either to want this power, or to have it in a very low degree. They are moved by inſtinct, habit, appetite, or natural affection, according as theſe principles are ſtirred by the preſent occaſion. But I ſee no reaſon to think that they can propoſe to themſelves a connected plan of life, or form general rules of conduct. Indeed, we ſee that many of the human ſpecies, to whom God has given this power, make little uſe of it. They act without a plan, as the paſſion or appetite which is ſtrongeſt at the time leads them.

9. The laſt property I ſhall mention of this faculty, is that which eſſentially diſtinguiſhes it from every other power of the mind; and it is, that it is not employed ſolely about things which have exiſtence. I can conceive a winged horſe or a centaur, as eaſily and as diſtinctly as I can conceive a man whom I have ſeen. Nor does this diſtinct conception incline my judgment in the leaſt to the belief, that a winged horſe or a centaur ever exiſted.

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It is not ſo with the other operations of our minds. They are employed about real exiſtences, and carry with them the belief of their objects. When I feel pain, I am compelled to believe that the pain that I feel has a real exiſtence. When I perceive any external object, my belief of the real exiſtence of the object is irreſiſtible. When I diſtinctly remember any event, though that event may not now exiſt, I can have no doubt but it did exiſt. That conſciouſneſs which we have of the operations of our own minds implies a belief of the real exiſtence of thoſe operations.

Thus we ſee, that the powers of ſenſation, of perception, of memory, and of conſciouſneſs, are all employed ſolely about objects that do exiſt, or have exiſted. But conception is often employed about objects that neither do, nor did, nor will exiſt. This is the very nature of this faculty, that its object, though diſtinctly conceived, may have no exiſtence. Such an object we call a creature of imagination; but this creature never was created.

That we may not impoſe upon ourſelves in this matter, we muſt diſtinguiſh between that act or operation of the mind, which we call conceiving an object, and the object which we conceive. When we conceive any thing, there is a real act or operation of the mind; of this we are conſcious, and can have no doubt of its exiſtence: But every ſuch act muſt have an object; for he that conceives, muſt conceive ſomething. Suppoſe he conceives a centaur, he may have a diſtinct conception of this object, though no centaur ever exiſted.

I am afraid, that, to thoſe who are unacquainted with the doctrine of Philoſophers upon this ſubject, I ſhall appear in a very ridiculous light, for inſiſting upon a point ſo very evident, as that men may barely conceive things that never exiſted. They will hardly believe, that any man in his wits ever doubted of it. Indeed, I know no truth more evident to the common ſenſe and to the experience of mankind. But if the authority of philoſophy, ancient

CHAP. II. and modern, oppoſes it, as I think it does, I wiſh not to treat that authority ſo faſtidiouſly, as not to attend patiently to what may be ſaid in ſupport of it.

CHAP. II.

Theories concerning Conception.

THE theory of ideas has been applied to the conception of objects as well as to perception and memory. Perhaps it will be irkſome to the reader, as it is to the writer, to return to that ſubject, after ſo much has been ſaid upon it; but its application to the conception of objects, which could not properly have been introduced before, gives a more comprehenſive view of it, and of the prejudices which have led Philoſophers ſo unanimouſly into it.

There are two prejudices which ſeem to me to have given riſe to the theory of ideas in all the various forms in which it has appeared in the courſe of above two thouſand years; and though they have no ſupport from the natural dictates of our faculties, or from attentive reflection upon their operations, they are prejudices which thoſe who ſpeculate upon this ſubject, are very apt to be led into by analogy.

The *firſt* is, That in all the operations of the underſtanding there muſt be ſome immediate intercourſe between the mind and its object, ſo that the one may act upon the other. The *ſecond*, That in all the operations of underſtanding there muſt be an object of thought, which really exiſts while we think of it; or, as ſome Philoſophers have expreſſed it, that which is not, cannot be intelligible.

Had Philoſophers perceived, that theſe are prejudices grounded only upon analogical reaſoning, we had never heard of ideas in the philoſophical ſenſe of that word.

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The firſt of theſe principles has led Philoſophers to think, that as the external objects of ſenſe are too remote to act upon the mind immediately, there muſt be ſome image or ſhadow of them that is preſent to the mind, and is the immediate object of perception. That there is ſuch an immediate object of perception, diſtinct from the external object, has been very unanimouſly held by Philoſophers, though they have differed much about the name, the nature, and the origin of thoſe immediate objects.

We have conſidered what has been ſaid in the ſupport of this principle, Eſſay II. chap. 14. to which the reader is referred, to prevent repetition.

I ſhall only add to what is there ſaid, That there appears no ſhadow of reaſon why the mind muſt have an object immediately preſent to it in its intellectual operations, any more than in its affections and paſſions. Philoſophers have not ſaid, that ideas are the immediate objects of love or reſentment, of eſteem or diſapprobation. It is, I think, acknowledged, that perſons and not ideas are the immediate objects of thoſe affections; perſons, who are as far from being immediately preſent to the mind as other external objects, and ſometimes perſons who have now no exiſtence in this world at leaſt, and who can neither act upon the mind, nor be acted upon by it.

The ſecond principle, which I conceive to be likewiſe a prejudice of Philoſophers grounded upon analogy, is now to be conſidered.

It contradicts directly what was laid down in the laſt article of the preceding chapter, to wit, that we may have a diſtinct conception of things which never exiſted. This is undoubtedly the common belief of thoſe who have not been inſtructed in philoſophy; and they will think it as ridiculous to defend it by reaſoning, as to oppoſe it.

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The Philoſopher ſays, Though there may be a remote object which does not exiſt, there muſt be an immediate object which really exiſts; for that which is not, cannot be an object of thought. The idea muſt be perceived by the mind, and if it does not exiſt there, there can be no perception of it, no operation of the mind about it.

This principle deſerves the more to be examined, becauſe the other before mentioned depends upon it; for although the laſt may be true, even if the firſt was falſe, yet if the laſt be not true, neither can the firſt: If we can conceive objects which have no exiſtence, it follows, that there may be objects of thought which neither act upon the mind, nor are acted upon by it; becauſe that which has no exiſtence can neither act nor be acted upon.

It is by theſe principles that Philoſophers have been led to think, that in every act of memory and of conception, as well as of perception, there are two objects. The one, the immediate object, the idea, the ſpecies, the form: The other, the mediate or external object. The vulgar know only of one object, which in perception is ſomething external that exiſts; in memory, ſomething that did exiſt; and in conception, may be ſomething that never exiſted: But the immediate object of the Philoſophers, the idea, is ſaid to exiſt, and to be perceived in all theſe operations.

Theſe principles have not only led Philoſophers to ſplit objects into two, where others can find but one, but likewiſe have led them to reduce the three operations now mentioned to one, making memory and conception, as well as perception, to be the perception of ideas. But nothing appears more evident to the vulgar, than that, what is only remembered, or only conceived, is not perceived; and to ſpeak of the perceptions of memory, appears to them as abſurd, as to ſpeak of the hearing of ſight.

In a word, theſe two principles carry us into the whole philoſophical

phical theory of ideas, and furniſh every argument that ever was uſed for their exiſtence. If they are true, that ſyſtem muſt be admitted with all its conſequences: If they are only prejudices, grounded upon analogical reaſoning, the whole ſyſtem muſt fall to the ground with them.

It is, therefore, of importance to trace thoſe principles, as far as we are able, to their origin, and to ſee, if poſſible, whether they have any juſt foundation in reaſon, or whether they are raſh concluſions, drawn from a ſuppoſed analogy between matter and mind.

The unlearned, who are guided by the dictates of Nature, and expreſs what they are conſcious of concerning the operations of their own mind, believe, that the object which they diſtinctly perceive certainly exiſts; that the object which they diſtinctly remember certainly did exiſt, but now may not; but as to things that are barely conceived, they know that they can conceive a thouſand things that never exiſted, and that the bare conception of a thing does not ſo much as afford a preſumption of its exiſtence. They give themſelves no trouble to know how theſe operations are performed, or to account for them from general principles.

But Philoſophers, who wiſh to diſcover the cauſes of things, and to account for theſe operations of mind, obſerving, that in other operations there muſt be not only an agent, but ſomething to act upon, have been led by analogy to conclude that it muſt be ſo in the operations of the mind.

The relation between the mind and its conceptions bears a very ſtrong and obvious analogy to the relation between a man and his work. Every ſcheme he forms, every diſcovery he makes by his reaſoning powers, is very properly called the work of his mind. Theſe works of the mind are ſometimes great and important works, and draw the attention and admiration of men.

It

CHAP. II. It is the province of the Philoſopher to conſider how ſuch works of the mind are produced, and of what materials they are compoſed. He calls the materials ideas. There muſt therefore be ideas, which the mind can arrange and form into a regular ſtructure. Every thing that is produced, muſt be produced of ſomething; and from nothing, nothing can be produced.

Some ſuch reaſoning as this ſeems to me to have given the firſt riſe to the philoſophical notions of ideas. Thoſe notions were formed into a ſyſtem by the Pythagoreans two thouſand years ago; and this ſyſtem was adopted by PLATO, and embelliſhed with all the powers of a fine and lofty imagination. I ſhall, in compliance with cuſtom, call it the Platonic ſyſtem of ideas, though in reality it was the invention of the Pythagorean ſchool.

The moſt arduous queſtion which employed the wits of men in the infancy of the Grecian philoſophy was, What was the origin of the world? From what principles and cauſes did it proceed? To this queſtion very different anſwers were given in the different ſchools. Moſt of them appear to us very ridiculous. The Pythagoreans, however, judged very rationally, from the order and beauty of the univerſe, that it muſt be the workmanſhip of an eternal, intelligent and good Being: And therefore they concluded the Deity to be one firſt principle or cauſe of the univerſe.

But they conceived there muſt be more. The univerſe muſt be made of ſomething. Every workman muſt have materials to work upon. That the world ſhould be made out of nothing ſeemed to them abſurd, becauſe every thing that is made muſt be made of ſomething.

Nullam rem e nihilo gigni divinitus unquam. LUCR.
De nihilo nihil, in nihilum nil poſſe reverti. PERS.

This maxim never was brought into doubt: Even in CICERO's time

time it continued to be held by all Philoſophers. What natural Philoſopher (ſays that author in his ſecond book of Divination) ever aſſerted that any thing could take its riſe from nothing, or be reduced to nothing? Becauſe men muſt have materials to work upon, they concluded it muſt be ſo with the Deity. This was reaſoning from analogy.

From this it followed, that an eternal uncreated matter was another firſt principle of the univerſe. But this matter they believed had no form nor quality. It was the ſame with the *materia prima*, or firſt matter of ARISTOTLE, who borrowed this part of his philoſophy from his predeceſſors.

To us it ſeems more rational to think that the Deity created matter with its qualities, than that the matter of the univerſe ſhould be eternal and ſelf-exiſtent. But ſo ſtrong was the prejudice of the ancient Philoſophers againſt what we call creation, that they rather choſe to have recourſe to this eternal and unintelligible matter, that the Deity might have materials to work upon.

The ſame analogy which led them to think that there muſt be an eternal matter of which the world was made, led them alſo to conclude that there muſt be an eternal pattern or model according to which it was made. Works of deſign and art muſt be diſtinctly conceived before they are made. The Deity, as an intelligent Being, about to execute a work of perfect beauty and regularity, muſt have had a diſtinct conception of his work before it was made. This appears very rational.

But this conception, being the work of the Divine intellect, ſomething muſt have exiſted as its object. This could only be ideas, which are the proper and immediate object of intellect.

From this inveſtigation of the principles or cauſes of the univerſe, thoſe Philoſophers concluded them to be three in number,

to

CHAP. II. to wit, an eternal matter as the material cauſe, eternal ide
model or exemplary cauſe, and an eternal intelligent mi
efficient cauſe.

As to the nature of thoſe eternal ideas, the Philoſophers
ſect aſcribed to them the moſt magnificent attributes. They were immutable and uncreated; the object of the Divine intellect before the world was made; and the only object of intellect and of ſcience to all intelligent beings. As far as intellect is ſuperior to ſenſe, ſo far are ideas ſuperior to all the objects of ſenſe. The objects of ſenſe being in a conſtant flux, cannot properly be ſaid to exiſt. Ideas are the things which have a real and permanent exiſtence. They are as various as the ſpecies of things, there being one idea of every ſpecies, but none of individuals. The idea is the eſſence of the ſpecies, and exiſted before any of the ſpecies was made. It is entire in every individual of the ſpecies, without being either divided or multiplied.

In our preſent ſtate, we have but an imperfect conception of the eternal ideas; but it is the higheſt felicity and perfection of men to be able to contemplate them. While we are in this priſon of the body, ſenſe, as a dead weight, bears us down from the contemplation of the intellectual objects; and it is only by a due purification of the ſoul, and abſtraction from ſenſe, that the intellectual eye is opened, and that we are enabled to mount upon the wings of intellect to the celeſtial world of ideas.

Such was the moſt ancient ſyſtem concerning ideas, of which we have any account. And however different from the modern, it appears to be built upon the prejudices we have mentioned; to wit, that in every operation, there muſt be ſomething to work upon; and that even in conception there muſt be an object which really exiſts.

For if thoſe ancient Philoſophers had thought it poſſible that the Deity

could operate without materials in the formation of the world, and that he could conceive the plan of it without a model, could have ſeen no reaſon to make matter and ideas eternal and ſelf-exiſtent principles, as well as the Deity himſelf. CHAP. II.

Whether they believed that the ideas were not only eternal, but eternally, and without a cauſe, arranged in that beautiful and perfect order, which they aſcribe to this intelligible world of ideas, I cannot ſay; but this ſeems to be a neceſſary conſequence of the ſyſtem: For if the Deity could not conceive the plan of the world which he made, without a model which really exiſted, that model could not be his work, nor contrived by his wiſdom; for if he made it, he muſt have conceived it before it was made; it muſt therefore have exiſted in all its beauty and order independent of the Deity; and this I think they acknowledged, by making the model, and the matter of this world, firſt principles, no leſs than the Deity.

If the Platonic ſyſtem be thus underſtood, (and I do not ſee how it can hang together otherwiſe), it leads to two conſequences that are unfavourable to it.

Firſt, Nothing is left to the Maker of this world but the ſkill to work after a model. The model had all the perfection and beauty that appears in the copy, and the Deity had only to copy after a pattern that exiſted independent of him. Indeed, the copy, if we believe thoſe Philoſophers, falls very far ſhort of the original; but this they ſeem to have aſcribed to the refractorineſs of matter, of which it was made.

Secondly, If the world of ideas, without being the work of a perfectly wiſe and good intelligent Being, could have ſo much beauty and perfection, how can we infer from the beauty and order of this world, which is but an imperfect copy of the other, that it muſt have been made by a perfectly wiſe and good Being?

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The force of this reaſoning, from the beauty and order of the univerſe, to its being the work of a wiſe Being, which appears invincible to every candid mind, and appeared ſo to thoſe ancient Philoſophers, is entirely deſtroyed by the ſuppoſition of the exiſtence of a world of ideas, of greater perfection and beauty, which never was made. Or, if the reaſoning be good, it will apply to the world of ideas, which muſt of conſequence have been made by a wiſe and good intelligent Being, and muſt have been conceived before it was made.

It may farther be obſerved, that all that is myſterious and unintelligible in the Platonic ideas, ariſes from attributing exiſtence to them. Take away this one attribute, all the reſt, however pompouſly expreſſed, are eaſily admitted and underſtood.

What is a Platonic idea? It is the eſſence of a ſpecies. It is the exemplar, the model, according to which, all the individuals of that ſpecies are made. It is entire in every individual of the ſpecies, without being multiplied or divided. It was an object of the Divine intellect from eternity, and is an object of contemplation and of ſcience to every intelligent being. It is eternal, immutable, and uncreated; and, to crown all, it not only exiſts, but has a more real and permanent exiſtence than any thing that ever God made.

Take this deſcription altogether, and it would require an OEDIPUS to unriddle it. But take away the laſt part of it, and nothing is more eaſy. It is eaſy to find five hundred things which anſwer to every article in the deſcription except the laſt.

Take for an inſtance the nature of a circle, as it is defined by EUCLID, an object which every intelligent being may conceive diſtinctly, though no circle had ever exiſted; it is the exemplar, the model, according to which all the individual figures of that ſpecies that ever exiſted were made; for they are all made according to the nature of a circle. It is entire in every individual of the

ſpecies,

ſpecies, without being multiplied or divided: For every circle is an entire circle; and all circles, in as far as they are circles, have one and the ſame nature. It was an object of the Divine intellect from all eternity, and may be an object of contemplation and of ſcience to every intelligent being. It is the eſſence of a ſpecies, and, like all other eſſences, it is eternal, immutable, and uncreated. This means no more, but that a circle always was a circle, and can never be any thing but a circle. It is the neceſſity of the thing, and not any act of creating power, that makes a circle to be a circle.

The nature of every ſpecies, whether of ſubſtance, of quality, or of relation, and in general every thing which the ancients called an univerſal, anſwers to the deſcription of a Platonic idea, if in that deſcription you leave out the attribute of exiſtence.

If we believe that no ſpecies of things could be conceived by the Almighty without a model that really exiſted, we muſt go back to the Platonic ſyſtem, however myſterious. But if it be true, that the Deity could have a diſtinct conception of things which did not exiſt, and that other intelligent beings may conceive objects which do not exiſt, the ſyſtem has no better foundation than this prejudice, that the operations of mind muſt be like thoſe of the body.

ARISTOTLE rejected the ideas of his maſter PLATO as viſionary; but he retained the prejudices that gave riſe to them, and therefore ſubſtituted ſomething in their place, but under a different name, and of a different origin.

He called the objects of intellect, intelligible ſpecies; thoſe of the memory and imagination, phantaſms, and thoſe of the ſenſes, ſenſible ſpecies. This change of the name was indeed very ſmall; for the Greek word of ARISTOTLE, which we tranſlate *ſpecies* or *form*, is ſo near to the Greek word idea, both in its ſound and ſignification, that, from their etymology, it would not be eaſy to give

CHAP. II. [redacted] are derived from the Gr[redacted] which [redacted] ay ſignify a viſion or ap[redacted] to the eye. CICERO, who underſtood Greek well, often [redacted] the Greek word *idea* by the Latin word *viſio*. But both [redacted] ing uſed as terms of art, one in the Platonic ſyſtem, th[redacted] the Peripatetic, the Latin writers generally borrowed the Greek word idea to expreſs the Platonic notion, and tranſlated ARISTOTLE's word, by the words *ſpecies* or *forma*; and in this they have been followed in the modern languages.

Thoſe forms or ſpecies were called intelligible, to diſtinguiſh them from ſenſible ſpecies, which ARISTOTLE held to be the immediate objects of ſenſe.

He thought that the ſenſible ſpecies come from the external object, and defined a *ſenſe* to be that which has the capacity to receive the form of ſenſible things without the matter; as wax receives the form of a ſeal without any of the matter of it. In like manner, he thought that the intellect receives the forms of things intelligible, and he calls it the place of forms.

I take it to have been the opinion of ARISTOTLE, that the intelligible forms in the human intellect are derived from the ſenſible by abſtraction, and other operations of the mind itſelf. As to the intelligible forms in the divine intellect, they muſt have had another origin; but I do not remember that he gives any opinion about them. He certainly maintained, however, that there is no intellection without intelligible ſpecies; no memory or imagination without phantaſms; no perception without ſenſible ſpecies. Treating of memory he propoſes a difficulty, and endeavours to reſolve it, how a phantaſm, that is a preſent object in the mind, ſhould repreſent a thing that is paſt.

Thus, I think, it appears, that the Peripatetic ſyſtem of ſpecies and phantaſms, as well as the Platonic ſyſtem of ideas, is grounded upon

[redacted] this principle, that in eve[redacted]t be [redacted]object that really exists; in [redacted]me- [redacted] to work upon. Whether this immediate object be called an [redacted]with PLATO, or a phantasm or species with ARISTOTLE; whether it be eternal and uncreated, or produced by the impressions of external objects, is of no consequence in the present argument. In both systems it was thought impossible, that the Deity could make the world without matter to work upon. In both it was thought impossible, that an intelligent Being could conceive any thing that did not exist, but by means of a model that really existed.

The Philosophers of the Alexandrian school, commonly called the latter Platonists, conceived the eternal ideas of things to be in the Divine intellect, and thereby avoided the absurdity of making them a principle distinct from and independent of the Deity; but still they held them to exist really in the Divine mind as the objects of conception, and as the patterns and archetypes of things that are made.

Modern Philosophers, still persuaded that of every thought there must be an immediate object that really exists, have not thought it necessary to distinguish by different names the immediate objects of intellect, of imagination, and of the senses, but have given the common name of *idea* to them all.

Whether these ideas be in the sensorium, or in the mind, or partly in the one, and partly in the other; whether they exist when they are not perceived, or only when they are perceived; whether they are the workmanship of the Deity or of the mind itself, or of external natural causes; with regard to these points, different authors seem to have different opinions, and the same author sometimes to waver or be diffident; but as to their existence, there seems to be great unanimity.

So

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So much is this opinion fixed in the minds of Philoſophers, that I doubt not but it will appear to moſt a very ſtrange paradox, or rather a contradiction that men ſhould think without ideas.

That it has the appearance of a contradiction, I confeſs. But this appearance ariſes from the ambiguity of the word idea. If the idea of a thing means only the thought of it, or the operation of the mind in thinking about it, which is the moſt common meaning of the word, to think without ideas, is to think without thought, which is undoubtedly a contradiction.

But an idea according to the definition given of it by Philoſophers, is not thought, but an object of thought, which really exiſts, and is perceived. Now whether is it a contradiction to ſay, that a man may think of an object that does not exiſt?

I acknowledge that a man cannot perceive an object that does not exiſt; nor can he remember an object that did not exiſt; but there appears to me no contradiction in his conceiving an object that neither does, nor ever did exiſt.

Let us take an example. I conceive a centaur. This conception is an operation of the mind, of which I am conſcious, and to which I can attend. The ſole object of it is a centaur, an animal which I believe never exiſted. I can ſee no contradiction in this.

The Philoſopher ſays, I cannot conceive a centaur without having an idea of it in my mind. I am at a loſs to underſtand what he means. He ſurely does not mean that I cannot conceive it without conceiving it. This would make me no wiſer. What then is this idea? Is it an animal, half horſe and half man? No. Then I am certain it is not the thing I conceive. Perhaps he will ſay, that the idea is an image of the animal, and is the immediate object of my conception, and that the animal is the mediate or remote object.

To

To this I anſwer: *Firſt*, I am certain there are not two objects of this conception, but one only; and that one is as immediate an object of my conception as any can be.

Secondly, This one object which I conceive, is not the image of an animal, it is an animal. I know what it is to conceive an image of an animal, and what it is to conceive an animal; and I can diſtinguiſh the one of theſe from the other without any danger of miſtake. The thing I conceive is a body of a certain figure and colour, having life and ſpontaneous motion. The Philoſopher ſays that the idea is an image of the animal, but that it has neither body, nor colour, nor life, nor ſpontaneous motion. This I am not able to comprehend.

Thirdly, I wiſh to know how this idea comes to be an object of my thought, when I cannot even conceive what it means; and if I did conceive it, this would be no evidence of its exiſtence, any more than my conception of a centaur is of its exiſtence. Philoſophers ſometimes ſay that we perceive ideas, ſometimes that we are conſcious of them. I can have no doubt of the exiſtence of any thing, which I either perceive, or of which I am conſcious; but I cannot find that I either perceive ideas or am conſcious of them.

Perception and conſciouſneſs are very different operations, and it is ſtrange that Philoſophers have never determined by which of them ideas are diſcerned. This is as if a man ſhould poſitively affirm that he perceived an object, but whether by his eyes, or his ears, or his touch, he could not ſay.

But may not a man who conceives a centaur ſay, that he has a diſtinct image of it in his mind? I think he may. And if he means by this way of ſpeaking what the vulgar mean, who never heard of the philoſophical theory of ideas, I find no fault with it. By a diſtinct image in the mind, the vulgar mean a diſtinct conception;

[redacted] it ſo, on account of the [redacted] d the conception of it. [redacted] all mankind, this oper[redacted] called imagination, and an image in the mind is only a per[redacted] for imagination. But to infer from this that there is really an image in the mind, diſtinct from the operation of conceiving the object, is to be miſled by an analogical expreſſion; as if, from the phraſes of deliberating and balancing things in the mind, we ſhould infer that there is really a balance exiſting in the mind for weighing motives and arguments.

The analogical words and phraſes, uſed in all languages to expreſs conception, do no doubt facilitate their being taken in a literal ſenſe. But if we only attend carefully to what we are conſcious of in this operation, we ſhall find no more reaſon to think that images do really exiſt in our minds, than that balances and other mechanical engines do.

We know of nothing that is in the mind but by conſciouſneſs, and we are conſcious of nothing but various modes of thinking; ſuch as underſtanding, willing, affection, paſſion, doing, ſuffering. If Philoſophers chuſe to give the name of an idea to any mode of thinking, of which we are conſcious, I have no objection to the name; but that it introduces a foreign word into our language without neceſſity, and a word that is very ambiguous, and apt to miſlead. But if they give that name to images in the mind, which are not thought, but only objects of thought, I can ſee no reaſon to think that there are ſuch things in nature. If they be, their exiſtence and their nature muſt be more evident than any thing elſe, becauſe we know nothing but by their means. I may add, that if they be, we can know nothing beſides them. For, from the exiſtence of images, we can never, by any juſt reaſoning, infer the exiſtence of any thing elſe, unleſs perhaps the exiſtence of an intelligent Author of them. In this Biſhop BERKELEY reaſoned right.

In

In every work of deſign, the work muſt be conceived before it is executed, that is, before it exiſts. If a model, conſiſting of ideas, muſt exiſt in the mind, as the object of this conception, that model is a work of deſign no leſs than the other, of which it is the model; and therefore, as a work of deſign, it muſt have been conceived before it exiſted. In every work of deſign, therefore, the conception muſt go before the exiſtence. This argument we applied before to the Platonic ſyſtem of eternal and immutable ideas, and it may be applied with equal force to all the ſyſtems of ideas.

If now it ſhould be aſked, What is the idea of a circle? I anſwer, It is the conception of a circle. What is the immediate object of this conception? The immediate and the only object of it is a circle. But where is this circle? It is no where. If it was an individual, and had a real exiſtence, it muſt have a place; but being an univerſal, it has no exiſtence, and therefore no place. Is it not in the mind of him that conceives it? The conception of it is in the mind, being an act of the mind; and in common language, a thing being in the mind, is a figurative expreſſion, ſignifying that the thing is conceived or remembered.

It may be aſked, Whether this conception is an image or reſemblance of a circle? I anſwer, I have already accounted for its being, in a figurative ſenſe, called the image of a circle in the mind. If the queſtion is meant in the literal ſenſe, we muſt obſerve, that the word *conception* has two meanings. Properly it ſignifies that operation of the mind which we have been endeavouring to explain; but ſometimes it is put for the object of conception, or thing conceived.

Now, if the queſtion be underſtood in the laſt of theſe ſenſes, the object of this conception is not an image or reſemblance of a circle; for it is a circle, and nothing can be an image of itſelf.

CHAP. II.

If the queſtion be, Whether the operation of mind in [redacted] a circle be an image or reſemblance of a circle? I think [redacted] and that no two things can be more perfectly unlike, tha[redacted] of thought and a ſpecies of figure. Nor is it more ſt[redacted] conception ſhould have no reſemblance to the object conce[redacted] that deſire ſhould have no reſemblance to the object deſi[redacted] ſentment to the object of reſentment.

I can likewiſe conceive an individual object that really exiſts, ſuch as St Paul's church in London. I have an idea of it; that is, I conceive it. The immediate object of this conception is four hundred miles diſtant; and I have no reaſon to think that it acts upon me, or that I act upon it; but I can think of it notwithſtanding. I can think of the firſt year, or the laſt year of the Julian period.

If, after all, it ſhould be thought, that images in the mind ſerve to account for this faculty of conceiving things moſt diſtant in time and place, and even things which do not exiſt, which otherwiſe would be altogether inconceivable; to this I anſwer, That accounts of things, grounded upon conjecture, have been the bane of true philoſophy in all ages. Experience may ſatisfy us, that it is an hundred times more probable that they are falſe than that they are true.

This account of the faculty of conception, by images in the mind, or in the brain, will deſerve the regard of thoſe who have a true taſte in philoſophy, when it is proved by ſolid arguments, *firſt*, That there are images in the mind, or in the brain, of the things we conceive. *Secondly*, That there is a faculty in the mind of perceiving ſuch images. *Thirdly*, That the perception of ſuch images produces the conception of things moſt diſtant, and even of things that have no exiſtence. And, *fourthly*, That the perception of individual images in the mind, or in the brain, gives us the conception of univerſals, which are the attributes of many individuals.

dividuals. Until this is done, the theory of images exiſting in the mind, or in the brain, ought to be placed in the ſame category with the ſenſible ſpecies, and *materia prima* of ARISTOTLE, and the vortices of DES CARTES.

CHAP. III.

Miſtakes concerning Conception.

1. WRITERS on Logic, after the example of ARISTOTLE, divide the operations of the underſtanding into three; ſimple apprehenſion, which is another word for conception, judgment, and reaſoning. They teach us, that reaſoning is expreſſed by a ſyllogiſm, judgment by a propoſition, and ſimple apprehenſion by a term only, that is, by one or more words which do not make a full propoſition, but only the ſubject or predicate of a propoſition. If by this they mean, as I think they do, that a propoſition, or even a ſyllogiſm, may not be ſimply apprehended, I believe this is a miſtake.

In all judgment and in all reaſoning conception is included. We can neither judge of a propoſition, nor reaſon about it, unleſs we conceive or apprehend it. We may diſtinctly conceive a propoſition, without judging of it at all. We may have no evidence on one ſide or the other; we may have no concern whether it be true or falſe. In theſe caſes we commonly form no judgment about it, though we perfectly underſtand its meaning.

A man may diſcourſe or plead, or write, for other ends than to find the truth. His learning, and wit, and invention, may be employed, while his judgment is not at all, or very little. When it is not truth, but ſome other end he purſues, judgment would

CHAP. III. be an impediment, unleſs for diſcovering the means of attaining his end; and therefore it is laid aſide, or employed ſolely for that purpoſe.

The buſineſs of an orator is ſaid to be, to find out what is fit to perſuade. This a man may do with much ingenuity, who never took the trouble to examine whether it ought to perſuade or not. Let it not be thought, therefore, that a man judges of the truth of every propoſition he utters, or hears uttered. In our commerce with the world, judgment is not the talent that bears the greateſt price; and therefore thoſe who are not ſincere lovers of truth, lay up this talent, where it ruſts and corrupts, while they carry others to market, for which there is greater demand.

2. The diviſion commonly made, by Logicians, of ſimple apprehenſion, into ſenſation, imagination, and pure intellection, ſeems to me very improper in ſeveral reſpects.

Firſt, Under the word ſenſation, they include not only what is properly ſo called, but the perception of external objects by the ſenſes. Theſe are very different operations of the mind; and although they are commonly conjoined by nature, ought to be carefully diſtinguiſhed by Philoſophers.

Secondly, Neither ſenſation, nor the perception of external objects, is ſimple apprehenſion. Both include judgment and belief, which are excluded from ſimple apprehenſion.

Thirdly, They diſtinguiſh imagination from pure intellection by this, that in imagination the image is in the brain, in pure intellection it is in the intellect. This is to ground a diſtinction upon an hypotheſis. We have no evidence that there are images either in the brain or in the intellect.

I take imagination, in its moſt proper ſenſe, to ſignify a lively conception

conception of objects of ſight. This is a talent of importance to poets and orators, and deſerves a proper name, on account of its connection with thoſe arts. According to this ſtrict meaning of the word, imagination is diſtinguiſhed from conception as a part from the whole. We conceive the objects of the other ſenſes, but it is not ſo proper to ſay that we imagine them. We conceive judgment, reaſoning, propoſitions, and arguments; but it is rather improper to ſay that we imagine theſe things.

This diſtinction between imagination and conception, may be illuſtrated by an example, which DES CARTES uſes to illuſtrate the diſtinction between imagination and pure intellection. We can imagine a triangle or a ſquare ſo clearly as to diſtinguiſh them from every other figure. But we cannot imagine a figure of a thouſand equal ſides and angles, ſo clearly. The beſt eye, by looking at it, could not diſtinguiſh it from every figure of more or fewer ſides. And that conception of its appearance to the eye, which we properly call imagination, cannot be more diſtinct than the appearance itſelf; yet we can conceive a figure of a thouſand ſides, and even can demonſtrate the properties which diſtinguiſh it from all figures of more or fewer ſides. It is not by the eye, but by a ſuperior faculty, that we form the notion of a great number, ſuch as a thouſand: And a diſtinct notion of this number of ſides not being to be got by the eye, it is not imagined but it is diſtinctly conceived, and eaſily diſtinguiſhed from every other number.

3. Simple apprehenſion is commonly repreſented as the firſt operation of the underſtanding; and judgment, as being a compoſition or combination of ſimple apprehenſions.

This miſtake has probably ariſen from the taking ſenſation, and the perception of objects by the ſenſes, to be nothing but ſimple apprehenſion. They are very probably the firſt operations of the mind, but they are not ſimple apprehenſions.

It

CHAP. III.

It is generally allowed, that we cannot conceive ſounds if we have never heard, nor colours if we have never ſeen; and the ſame thing may be ſaid of the objects of the other ſenſes. In like manner, we muſt have judged or reaſoned before we have the conception or ſimple apprehenſion of judgment, and of reaſoning.

Simple apprehenſion, therefore, though it be the ſimpleſt, is not the firſt operation of the underſtanding; and inſtead of ſaying, that the more complex operations of the mind are formed by compounding ſimple apprehenſions, we ought rather to ſay, that ſimple apprehenſions are got by analyſing more complex operations.

A ſimilar miſtake, which is carried through the whole of Mr LOCKE's Eſſay, may be here mentioned. It is, that our ſimpleſt ideas or conceptions are got immediately by the ſenſes, or by conſciouſneſs, and the complex afterwards formed by compounding them. I apprehend, it is far otherwiſe.

Nature preſents no object to the ſenſes, or to conſciouſneſs, that is not complex. Thus, by our ſenſes we perceive bodies of various kinds; but every body is a complex object; it has length, breadth, and thickneſs; it has figure, and colour, and various other ſenſible qualities, which are blended together in the ſame ſubject; and I apprehend, that brute animals, who have the ſame ſenſes that we have, cannot ſeparate the different qualities belonging to the ſame ſubject, and have only a complex and confuſed notion of the whole: Such alſo would be our notions of the objects of ſenſe, if we had not ſuperior powers of underſtanding, by which we can analyſe the complex object, abſtract every particular attribute from the reſt, and form a diſtinct conception of it.

So that it is not by the ſenſes immediately, but rather by the powers of analyſing and abſtraction, that we get the moſt ſimple, and the moſt diſtinct notions even of the objects of ſenſe. This will be more fully explained in another place.

4. There

4. There remains another miſtake concerning conception, which deſerves to be noticed. It is, that our conception of things is a teſt of their poſſibility, ſo that, what we can diſtinctly conceive, we may conclude to be poſſible; and of what is impoſſible, we can have no conception.

This opinion has been held by Philoſophers for more than an hundred years, without contradiction or diſſent, as far as I know; and if it be an error, it may be of ſome uſe to enquire into its origin, and the cauſes that it has been ſo generally received as a maxim, whoſe truth could not be brought into doubt.

One of the fruitleſs queſtions agitated among the ſcholaſtic Philoſophers in the dark ages was, What is the criterion of truth? as if men could have any other way to diſtinguiſh truth from error, but by the right uſe of that power of judging which God has given them.

DES CARTES endeavoured to put an end to this controverſy, by making it a fundamental principle in his ſyſtem, that whatever we clearly and diſtinctly perceive, is true.

To underſtand this principle of DES CARTES, it muſt be obſerved, that he gave the name of perception to every power of the human underſtanding; and in explaining this very maxim, he tells us, that ſenſe, imagination, and pure intellection, are only different modes of perceiving, and ſo the maxim was underſtood by all his followers.

The learned Dr CUDWORTH ſeems alſo to have adopted this principle: "The criterion of true knowledge, ſays he, is only to "be looked for in our knowledge and conceptions themſelves: "For the entity of all theoretical truth is nothing elſe but clear "intelligibility, and whatever is clearly conceived is an entity and "a truth; but that which is falſe, Divine power itſelf cannot "make

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" make it to be clearly and diſtinctly underſtood. A falſehood " can never be clearly conceived or apprehended to be true." Etern. and Immut. Morality, p. 172, &c.

This Carteſian maxim ſeems to me to have led the way to that now under conſideration, which ſeems to have been adopted as the proper correction of the former. When the authority of DES CARTES declined, men began to ſee that we may clearly and diſtinctly conceive what is not true, but thought, that our conception, though not in all caſes a teſt of truth, might be a teſt of poſſibility.

This indeed ſeems to be a neceſſary conſequence of the received doctrine of ideas; it being evident, that there can be no diſtinct image, either in the mind or any where elſe, of that which is impoſſible. The ambiguity of the word *conceive*, which we obſerved Eſſay I. chap. 1. and the common phraſeology of ſaying *we cannot conceive ſuch a thing*, when we would ſignify that we think it impoſſible, might likewiſe contribute to the reception of this doctrine.

But whatever was the origin of this opinion, it ſeems to prevail univerſally, and to be received as a maxim.

" The bare having an idea of the propoſition proves the thing " not to be impoſſible; for of an impoſſible propoſition there can " be no idea." Dr SAM. CLARKE.

" Of that which neither does nor can exiſt we can have no " idea." L. BOLINGBROKE.

" The meaſure of impoſſibility to us is inconceivableneſs, that " of which we can have no idea, but that reflecting upon it, it " appears to be nothing, we pronounce to be impoſſible." ABERNETHY.

" In

" In every idea is implied the poſſibility of the exiſtence of its " object, nothing being clearer than that there can be no idea of " an impoſſibility, or conception of what cannot exiſt." Dr PRICE. CHAP. III.

" Impoſſibile eſt cujus nullam notionem formare poſſumus; " poſſibile e contra, cui aliqua reſpondet notio." WOLFII ONTOLOG.

" It is an eſtabliſhed maxim in metaphyſics, that whatever the " mind conceives, includes the idea of poſſible exiſtence, or, in " other words, that nothing we imagine is abſolutely impoſſible." D. HUME.

It were eaſy to muſter up many other reſpectable authorities for this maxim, and I have never found one that called it in queſtion.

If the maxim be true in the extent which the famous WOLFIUS has given it, in the paſſage above quoted, we ſhall have a ſhort road to the determination of every queſtion about the poſſibility or impoſſibility of things. We need only look into our own breaſt, and that, like the Urim and Thummim, will give an infallible anſwer. If we can conceive the thing, it is poſſible; if not, it is impoſſible. And ſurely every man may know whether he can conceive what is affirmed or not.

Other Philoſophers have been ſatisfied with one half of the maxim of WOLFIUS. They ſay, that whatever we can conceive is poſſible; but they do not ſay, that whatever we cannot conceive is impoſſible,

I cannot help thinking even this to be a miſtake, which Philoſophers have been unwarily led into, from the cauſes before mentioned. My reaſons are theſe:

CHAP. III.

1. Whatever is ſaid to be poſſible or impoſſible is expreſſed by a propoſition. Now, What is it to conceive a propoſition? I think it is no more than to underſtand diſtinctly its meaning. I know no more that can be meant by ſimple apprehenſion or conception, when applied to a propoſition. The axiom, therefore, amounts to this: Every propoſition, of which you underſtand the meaning diſtinctly, is poſſible. I am perſuaded, that I underſtand as diſtinctly the meaning of this propoſition, *Any two ſides of a triangle are together equal to the third*, as of this, *Any two ſides of a triangle are together greater than the third*; yet the firſt of theſe is impoſſible.

Perhaps it will be ſaid, that though you underſtand the meaning of the impoſſible propoſition, you cannot ſuppoſe or conceive it to be true.

Here we are to examine the meaning of the phraſes of *ſuppoſing* and *conceiving* a propoſition to be true. I can certainly ſuppoſe it to be true, becauſe I can draw conſequences from it which I find to be impoſſible, as well as the propoſition itſelf.

If by conceiving it to be true be meant giving ſome degree of aſſent to it, however ſmall, this, I confeſs, I cannot do. But will it be ſaid, that every propoſition to which I can give any degree of aſſent is poſſible? This contradicts experience, and therefore the maxim cannot be true in this ſenſe.

Sometimes, when we ſay that *we cannot conceive a thing to be true*, we mean by that expreſſion, that *we judge it to be impoſſible*. In this ſenſe, I cannot, indeed, conceive it to be true, that two ſides of a triangle are equal to the third. I judge it to be impoſſible. If, then, we underſtand in this ſenſe that maxim, that nothing we can conceive is impoſſible, the meaning will be, that nothing is impoſſible which we judge to be poſſible. But does it not often happen, that what one man judges to be poſſible, another man judges to be impoſſible? The maxim, therefore, is not true in this ſenſe.

I am not able to find any other meaning of *conceiving a propoſition*, or of *conceiving it to be true*, beſides theſe I have mentioned. I know nothing that can be meant by having the idea of a propoſition, but either the underſtanding its meaning, or the judging of its truth. I can underſtand a propoſition that is falſe or impoſſible, as well as one that is true or poſſible; and I find that men have contradictory judgments about what is poſſible or impoſſible, as well as about other things. In what ſenſe then can it be ſaid, that the having an idea of a propoſition gives certain evidence that it is poſſible?

If it be ſaid, that the idea of a propoſition is an image of it in the mind; I think indeed there cannot be a diſtinct image either in the mind, or elſewhere, of that which is impoſſible; but what is meant by the image of a propoſition I am not able to comprehend, and I ſhall be glad to be informed.

2. Every propoſition, that is neceſſarily true, ſtands oppoſed to a contradictory propoſition that is impoſſible; and he that conceives one, conceives both: Thus a man who believes that two and three neceſſarily make five, muſt believe it to be impoſſible that two and three ſhould not make five. He conceives both propoſitions when he believes one. Every propoſition carries its contradictory in its boſom, and both are conceived at the ſame time. "It is confeſſed, "ſays Mr HUME, that in all caſes where we diſſent from any per- "ſon, we conceive both ſides of the queſtion, but we can believe "only one." From this it certainly follows, that when we diſſent from any perſon about a neceſſary propoſition, we conceive one that is impoſſible; yet I know no Philoſopher who has made ſo much uſe of the maxim, that whatever we conceive is poſſible, as Mr HUME. A great part of his peculiar tenets is built upon it; and if it is true, they muſt be true. But he did not perceive, that in the paſſage now quoted, the truth of which is evident, he contradicts it himſelf.

CHAP. III.

3. Mathematicians have, in many caſes, proved ſome things to be poſſible, and others to be impoſſible; which, without demonſtration, would not have been believed: Yet I have never known any Mathematician has attempted to prove a thing to be poſſible, becauſe it can be conceived; or impoſſible, becauſe it cannot be conceived. Why is not this maxim applied to determine whether it is poſſible to ſquare the circle? a point about which eminent Mathematicians have differed. It is eaſy to conceive the infinite ſeries of numbers, and intermediate fractions, wherein number, integral or fractional, may bear the ſame ratio to another, as the ſide of a ſquare bears to its diagonal; yet, however conceivable this may be, it may be demonſtrated to be impoſſible.

4. Mathematicians often require us to conceive things that are impoſſible, in order to prove them to be ſo. This is the caſe in all their demonſtrations, *ad abſurdum*. Conceive, ſays EUCLID, a right line drawn from one point of the circumference of a circle to another, to fall without the circle; I conceive this, I reaſon from it, until I come to a conſequence that is manifeſtly abſurd; and from thence conclude, that the thing which I conceived is impoſſible.

Having ſaid ſo much to ſhew, that our power of conceiving a propoſition is no criterion of its poſſibility or impoſſibility, I ſhall add a few obſervations on the extent of our knowledge of this kind.

1. There are many propoſitions which, by the faculties God has given us, we judge to be neceſſary, as well as true. All mathematical propoſitions are of this kind, and many others. The contradictories of ſuch propoſitions muſt be impoſſible. Our knowledge, therefore, of what is impoſſible, muſt at leaſt be as extenſive as our knowledge of neceſſary truth.

2. By our ſenſes, by memory, by teſtimony, and by other means, we know many things to be true, which do not appear to be neceſſary. But whatever is true, is poſſible. Our knowledge, therefore, of

of what is poſſible, muſt at leaſt extend as far as our knowledge of truth. CHAP. III.

3. If a man pretends to determine the poſſibility or impoſſibility of things beyond theſe limits, let him bring proof. I do not ſay that no ſuch proof can be brought. It has been brought in many caſes, particularly in mathematics. But I ſay, that his being able to conceive a thing, is no proof that it is poſſible. Mathematics afford many inſtances of impoſſibilities in the nature of things, which no man would have believed, if they had not been ſtrictly demonſtrated. Perhaps, if we were able to reaſon demonſtratively in other ſubjects, to as great extent as in mathematics, we might find many things to be impoſſible, which we conclude, without heſitation, to be poſſible.

It is poſſible, you ſay, that God might have made an univerſe of ſenſible and rational creatures, into which neither natural nor moral evil ſhould ever enter. It may be ſo, for what I know: But how do you know that it is poſſible? That you can conceive it, I grant; but this is no proof. I cannot admit, as an argument, or even as a preſſing difficulty, what is grounded on the ſuppoſition that ſuch a thing is poſſible, when there is no good evidence that it is poſſible, and, for any thing we know, it may in the nature of things be impoſſible.

CHAP. IV.

Of the Train of Thought in the Mind.

EVERY man is conſcious of a ſucceſſion of thoughts which paſs in his mind while he is awake, even when they are not excited by external objects.

The

CHAP. IV. The mind on this account may be compared to liquor in the ſtate of fermentation. When it is not in this ſtate, it remains at reſt, until it is moved by ſome exte in the ſtate of fermentation, it has ſome cauſe which, even when there is no impulſe from wit to be at reſt a moment, but produces a conſtan lition, while it continues to ferment.

There is ſurely no ſimilitude between motion there is an analogy, ſo obvious to all men, that the ſame words are often applied to both; and many modifications of thought have no name but ſuch as is borrowed from the modifications of motion. Many thoughts are excited by the ſenſes. The cauſes or occaſions of theſe may be conſidered as external: But, when ſuch external cauſes do not operate upon us, we continue to think from ſome internal cauſe. From the conſtitution of the mind itſelf there is a conſtant ebullition of thought, a conſtant inteſtine motion; not only of thoughts barely ſpeculative, but of ſentiments, paſſions and affections, which attend them.

This continued ſucceſſion of thought has, by modern Philoſophers, been called the *imagination*. I think it was formerly called the *fancy*, or the *phantaſy*. If the old name be laid aſide, it were to be wiſhed that it had got a name leſs ambiguous than that of imagination, a name which had two or three meanings beſides.

It is often called the *train of ideas*. This may lead one to think that it is a train of bare conceptions; but this would ſurely be a miſtake. It is made up of many other operations of mind, as well as of conceptions, or ideas.

Memory, judgment, reaſoning, paſſions, affections and purpoſes; in a word, every operation of the mind, excepting thoſe of ſenſe, is exerted occaſionally in this train of thought, and has its ſhare as an ingredient: So that we muſt take the word idea in a very extenſive

extenſive ſenſe, if we make the train of our [redacted] HAP. IV.
train of ideas.

[redacted] paſs from the name, and conſider the thing, we may obſerve, [redacted]e trains of thought in the mind are of two kinds; they are [redacted]ſuch as flow ſpontaneouſly, like water from a fountain, with[redacted]y exertion of a governing principle to arrange them; or they [redacted]gulated and directed by an active effort of the mind, with [redacted]view and intention.

Before we conſider theſe in their order, it is proper to premiſe, that theſe two kinds, however diſtinct in their nature, are for the moſt part mixed, in perſons awake and come to years of underſtanding.

On the one hand, we are rarely ſo vacant of all project and deſign, as to let our thoughts take their own courſe, without the leaſt check or direction: Or if at any time we ſhould be in this ſtate, ſome object will preſent itſelf, which is too intereſting not to engage the attention, and rouſe the active or contemplative powers that were at reſt.

On the other hand, when a man is giving the moſt intenſe application to any ſpeculation, or to any ſcheme of conduct, when he wills to exclude every thought that is foreign to his preſent purpoſe, ſuch thoughts will often impertinently intrude upon him, in ſpite of his endeavours to the contrary, and occupy, by a kind of violence, ſome part of the time deſtined to another purpoſe. One man may have the command of his thoughts more than another man, and the ſame man more at one time than at another: But I apprehend, in the beſt trained mind the thoughts will ſometimes be reſtive, ſometimes capricious and ſelf-willed, when we wiſh to have them moſt under command.

It has been obſerved very juſtly, that we muſt not aſcribe to the mind

CHAP. IV. mind the power of calling up any thought at pleaſure, becauſe ſuch a call or volition ſuppoſes that thought to be already in the mind; for otherwiſe, how ſhould it be the object of volition? As this muſt be granted on the one hand, ſo it is no leſs certain on the other, that a man has a conſiderable power in regulating and diſpoſing his own thoughts. Of this every man is conſcious, and I can no more doubt of it, than I can doubt whether I think at all.

We ſeem to treat the thoughts that preſent themſelves to the fancy in crowds, as a great man treats thoſe that attend his levee. They are all ambitious of his attention; he goes round the circle, beſtowing a bow upon one, a ſmile upon another; aſks a ſhort queſtion of a third; while a fourth is honoured with a particular conference; and the greater part have no particular mark of attention, but go as they came. It is true, he can give no mark of his attention to thoſe who were not there, but he has a ſufficient number for making a choice and diſtinction.

In like manner, a number of thoughts preſent themſelves to the fancy ſpontaneouſly; but if we pay no attention to them, nor hold any conference with them, they paſs with the crowd, and are immediately forgot, as if they had never appeared. But thoſe to which we think proper to pay attention, may be ſtopped, examined, and arranged, for any particular purpoſe we have in view.

It may likewiſe be obſerved, that a train of thought, which was at firſt compoſed by application and judgment, when it has been often repeated, and becomes familiar, will preſent itſelf ſpontaneouſly. Thus when a man has compoſed an air in muſic, ſo as to pleaſe his own ear; after he has played, or ſung it often, the notes will arrange themſelves in juſt order; and it requires no effort to regulate their ſucceſſion.

Thus we ſee, that the fancy is made up of trains of thinking; ſome

ſome of which are ſpontaneous, others ſtudied and regulated; and the greater part are mixed of both kinds, and take their denomination from that which is moſt prevalent: And that a train of thought, which at firſt was ſtudied and compoſed, may by habit preſent itſelf ſpontaneouſly. Having premiſed theſe things, let us return to thoſe trains of thought which are ſpontaneous, which muſt be firſt in the order of nature.

When the work of the day is over, and a man lies down to relax his body and mind, he cannot ceaſe from thinking, though he deſires it. Something occurs to his fancy; that is followed by another thing, and ſo his thoughts are carried on from one object to another, until ſleep cloſes the ſcene.

In this operation of the mind, it is not one faculty only that is employed; there are many that join together in its production. Sometimes the tranſactions of the day are brought upon the ſtage, and acted over again, as it were, upon this theatre of the imagination. In this caſe, memory ſurely acts the moſt conſiderable part, ſince the ſcenes exhibited are not fictions, but realities, which we remember; yet in this caſe the memory does not act alone, other powers are employed, and attend upon their proper objects. The tranſactions remembered will be more or leſs intereſting; and we cannot then review our own conduct, nor that of others, without paſſing ſome judgment upon it. This we approve, that we diſapprove. This elevates, that humbles and depreſſes us. Perſons that are not abſolutely indifferent to us, can hardly appear, even to the imagination, without ſome friendly or unfriendly emotion. We judge and reaſon about things, as well as perſons in ſuch reveries. We remember what a man ſaid and did; from this we paſs to his deſigns, and to his general character, and frame ſome hypotheſis to make the whole conſiſtent. Such trains of thought we may call hiſtorical.

There are others which we may call romantic, in which the

CHAP. IV. plot is formed by the creative power of fancy, without any regard to what did or will happen. In theſe alſo, the [redacted] ment, taſte, moral ſentiment, as well as the paſſion[redacted] come in and take a ſhare in the execution.

In theſe ſcenes, the man himſelf commonly act[redacted] guiſhed part, and ſeldom does any thing which he [redacted] Here the miſer will be generous, the coward brave, [redacted] honeſt. Mr ADDISON, in the *Spectator*, calls this p[redacted] cy, caſtle building.

The young Politician, who has turned his thoughts to the affairs of government, becomes in his imagination a miniſter of ſtate. He examines every ſpring and wheel of the machine of government with the niceſt eye, and the moſt exact judgment. He finds a proper remedy for every diſorder of the commonwealth, quickens trade and manufactures by ſalutary laws, encourages arts and ſciences, and makes the nation happy at home, and reſpected abroad. He feels the reward of his good adminiſtration, in that ſelf-approbation which attends it, and is happy in acquiring, by his wiſe and patriotic conduct, the bleſſings of the preſent age, and the praiſes of thoſe that are to come.

It is probable, that, upon the ſtage of imagination, more great exploits have been performed in every age, than have been upon the ſtage of life from the beginning of the world. An innate deſire of ſelf-approbation is undoubtedly a part of the human conſtitution. It is a powerful ſpur to worthy conduct, and is intended as ſuch by the Author of our being. A man cannot be eaſy or happy, unleſs this deſire be in ſome meaſure gratified. While he conceives himſelf worthleſs and baſe, he can reliſh no enjoyment. The humiliating mortifying ſentiment muſt be removed, and this natural deſire of ſelf-approbation will either produce a noble effort to acquire real worth, which is its proper direction, or it will lead into ſome of thoſe arts of ſelf-deceit, which create a falſe opinion of worth.

A caſtle builder, in the fictitious ſcenes of his fancy, will figure, CHAP. IV.
[redacted]cording to his real character, but according to the higheſt
[redacted] he has been able to form of himſelf, and perhaps far be-
[redacted]hat opinion. For in thoſe imaginary conflicts the paſſions
[redacted]yield to reaſon, and a man exerts the nobleſt efforts of vir-
[redacted]d magnanimity, with the ſame eaſe, as, in his dreams, he
[redacted]rough the air, or plunges to the bottom of the ocean.

The romantic ſcenes of fancy are moſt commonly the occupation of young minds, not yet ſo deeply engaged in life as to have their thoughts taken up by its real cares and buſineſs.

Thoſe active powers of the mind, which are moſt luxuriant by conſtitution, or have been moſt cheriſhed by education, impatient to exert themſelves, hurry the thought into ſcenes that give them play; and the boy commences in imagination, according to the bent of his mind, a general or a ſtateſman, a poet or an orator.

When the fair ones become caſtle builders, they uſe different materials; and while the young ſoldier is carried into the field of Mars, where he pierces the thickeſt ſquadrons of the enemy, deſpiſing death in all its forms, the gay and lovely nymph, whoſe heart has never felt the tender paſſion, is tranſported into a brilliant aſſembly, where ſhe draws the attention of every eye, and makes an impreſſion on the nobleſt heart.

But no ſooner has Cupid's arrow found its way into her own heart, than the whole ſcenery of her imagination is changed. Balls and aſſemblies have now no charms. Woods and groves, the flowery bank, and the cryſtal fountain, are the ſcenes ſhe frequents in imagination. She becomes an Arcadian ſhepherdeſs, feeding her flock beſides that of her Strephon, and wants no more to complete her happineſs.

In a few years the love-ſick maid is transformed into the ſolici-

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tous mother. Her ſmiling offſpring play around her. She views them with a parent's eye. Her imagination immediately raiſes them to manhood, and brings them forth upon the ſtage of life. One ſon makes a figure in the army, another ſhines at the bar; her daughters are happily diſpoſed of in marriage, and bring new alliances to the family. Her childrens children riſe up before her, and venerate her gray hairs.

Thus, the ſpontaneous ſallies of fancy are as various as the cares and fears, the deſires and hopes, of man.

Quicquid agunt homines, votum, timor, ira, voluptas,
Gaudia, diſcurſus:

Theſe fill up the ſcenes of fancy, as well as the page of the Satyriſt. Whatever poſſeſſes the heart makes occaſional excurſions into the imagination, and acts ſuch ſcenes upon that theatre as are agreeable to the prevailing paſſion. The man of traffic, who has committed a rich cargo to the inconſtant ocean, follows it in his thought; and, according as his hopes or his fears prevail, he is haunted with ſtorms, and rocks, and ſhipwreck; or he makes a happy and a lucrative voyage; and before his veſſel has loſt ſight of land, he has diſpoſed of the profit which ſhe is to bring at her return.

The Poet is carried into the Elyſian fields, where he converſes with the ghoſts of HOMER and ORPHEUS. The Philoſopher makes a tour through the planetary ſyſtem, or goes down to the centre of the earth, and examines its various ſtrata. In the devout man likewiſe, the great objects that poſſeſs his heart often play in his imagination; ſometimes he is tranſported to the regions of the bleſſed, from whence he looks down with pity upon the folly and the pageantry of human life; or he proſtrates himſelf before the throne of the Moſt High with devout veneration; or he converſes with celeſtial ſpirits about the natural and moral kingdom of God, which

which he now ſees only by a faint light, but hopes hereafter to view with a ſteadier and brighter ray.

In perſons come to maturity, there is even in theſe ſpontaneous ſallies of fancy, ſome arrangement of thought; and I conceive that it will be readily allowed, that in thoſe who have the greateſt ſtock of knowledge, and the beſt natural parts, even the ſpontaneous movements of fancy will be the moſt regular and connected. They have an order, connection, and unity, by which they are no leſs diſtinguiſhed from the dreams of one aſleep, or the ravings of one delirious on the one hand, than from the finiſhed productions of art on the other.

How is this regular arrangement brought about? It has all the marks of judgment and reaſon, yet it ſeems to go before judgment, and to ſpring forth ſpontaneouſly.

Shall we believe with LEIBNITZ, that the mind was originally formed like a watch wound up; and that all its thoughts, purpoſes, paſſions, and actions, are effected by the gradual evolution of the original ſpring of the machine, and ſucceed each other in order, as neceſſarily as the motions and pulſations of a watch?

If a child of three or four years, were put to account for the phænomena of a watch, he would conceive that there is a little man within the watch, or ſome other little animal, that beats continually, and produces the motion. Whether the hypotheſis of this young Philoſopher in turning the watch ſpring into a man, or that of the German Philoſopher in turning a man into a watch ſpring, be the moſt rational, ſeems hard to determine.

To account for the regularity of our firſt thoughts, from motions of animal ſpirits, vibrations of nerves, attractions of ideas, or from any other unthinking cauſe, whether mechanical or contingent, ſeems equally irrational.

If

CHAP. IV. If we be not able to diſtinguiſh the ſtrongeſt marks of thought and deſign from the effects of mechaniſm or contingency, the conſequence will be very melancholy: For it muſt neceſſarily follow, that we have no evidence of thought in any of our fellow men, nay that we have no evidence of thought or deſign in the ſtructure and government of the univerſe. If a good period or ſentence was ever produced without having had any judgment previouſly employed about it, why not an Iliad or Eneid? They differ only in leſs and more; and we ſhould do injuſtice to the Philoſopher of Laputa, in laughing at his project of making poems by the turning of a wheel, if a concurrence of unthinking cauſes may produce a rational train of thought.

It is, therefore, in itſelf highly probable, to ſay no more, that whatſoever is regular and rational in a train of thought, which preſents itſelf ſpontaneouſly to a man's fancy, without any ſtudy, is a copy of what had been before compoſed by his own rational powers, or thoſe of ſome other perſon.

We certainly judge ſo in ſimilar caſes. Thus, in a book I find a train of thinking, which has the marks of knowledge and judgment. I aſk how it was produced? It is printed in a book. This does not ſatisfy me, becauſe the book has no knowledge nor reaſon. I am told that a printer printed it, and a compoſitor ſet the types. Neither does this ſatisfy me. Theſe cauſes perhaps knew very little of the ſubject. There muſt be a prior cauſe of the compoſition. It was printed from a manuſcript. True. But the manuſcript is as ignorant as the printed book. The manuſcript was written or dictated by a man of knowledge and judgment. This, and this only, will ſatisfy a man of common underſtanding; and it appears to him extremely ridiculous to believe that ſuch a train of thinking could originally be produced by any cauſe that neither reaſons nor thinks.

Whether ſuch a train of thinking be printed in a book, or printed,

printed, ſo to ſpeak, in his mind, and iſſue ſpontaneouſly from his fancy, it muſt have been compoſed with judgment by himſelf, or by ſome other rational being.

This, I think, will be confirmed by tracing the progreſs of the human fancy as far back as we are able.

We have not the means of knowing how the fancy is employed in infants. Their time is divided between the employment of their ſenſes and ſound ſleep: So that there is little time left for imagination, and the materials it has to work upon are probably very ſcanty. A few days after they are born, ſometimes a few hours, we ſee them ſmile in their ſleep. But what they ſmile at is not eaſy to gueſs; for they do not ſmile at any thing they ſee, when awake, for ſome months after they are born. It is likewiſe common to ſee them move their lips in ſleep, as if they were ſucking.

Theſe things ſeem to diſcover ſome working of the imagination; but there is no reaſon to think that there is any regular train of thought in the mind of infants.

By a regular train of thought, I mean that which has a beginning, a middle, and an end, an arrangement of its parts, according to ſome rule, or with ſome intention. Thus, the conception of a deſign, and of the means of executing it; the conception of a whole, and the number and order of the parts. Theſe are inſtances of the moſt ſimple trains of thought that can be called regular.

Man has undoubtedly a power (whether we call it taſte or judgment, is not of any conſequence in the preſent argument) whereby he diſtinguiſhes between a compoſition, and a heap of materials; between a houſe, for inſtance, and a heap of ſtones; between a ſentence and a heap of words; between a picture, and

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CHAP. IV. a heap of colours. It does not appear to me that children have any regular trains of thought until this power begins to operate. Thoſe who are born ſuch idiots as never to ſhew any ſigns of this power, ſhow as little any ſigns of regularity of thought. It ſeems, therefore, that this power is connected with all regular trains of thought, and may be the cauſe of them.

Such trains of thought diſcover themſelves in children about two years of age. They can then give attention to the operations of older children in making their little houſes, and ſhips, and other ſuch things, in imitation of the works of men. They are then capable of underſtanding a little of language, which ſhews both a regular train of thinking, and ſome degree of abſtraction. I think we may perceive a diſtinction between the faculties of children of two or three years of age, and thoſe of the moſt ſagacious brutes. They can then perceive deſign and regularity in the works of others, eſpecially of older children; their little minds are fired with the diſcovery; they are eager to imitate it, and never at reſt till they can exhibit ſomething of the ſame kind.

When a child firſt learns by imitation to do ſomething that requires deſign, how does he exult! PYTHAGORAS was not more happy in the diſcovery of his famous theorem. He ſeems then firſt to reflect upon himſelf, and to ſwell with ſelf-eſteem. His eyes ſparkle. He is impatient to ſhew his performance to all about him, and thinks himſelf entitled to their applauſe. He is applauded by all, and feels the ſame emotion from this applauſe, as a Roman Conſul did from a triumph. He has now a conſciouſneſs of ſome worth in himſelf. He aſſumes a ſuperiority over thoſe who are not ſo wiſe; and pays reſpect to thoſe who are wiſer than himſelf. He attempts ſomething elſe, and is every day reaping new laurels.

As children grow up, they are delighted with tales, with childiſh games, with deſigns and ſtratagems: Every thing of this kind ſtores the fancy with a new regular train of thought, which becomes familiar

miliar by repetition, ſo that one part draws the whole after it in the imagination.

The imagination of a child, like the hand of a painter, is long employed in copying the works of others, before it attempts any invention of its own.

The power of invention is not yet brought forth, but it is coming forward, and, like the bud of a tree, is ready to burſt its integuments, when ſome accident aids its eruption.

There is no power of the underſtanding that gives ſo much pleaſure to the owner as that of invention; whether it be employed in mechanics, in ſcience, in the conduct of life, in poetry, in wit, or in the fine arts. One who is conſcious of it, acquires thereby a worth and importance in his own eye which he had not before. He looks upon himſelf as one who formerly lived upon the bounty and gratuity of others, but who has now acquired ſome property of his own. When this power begins to be felt in the young mind, it has the grace of novelty added to its other charms, and, like the youngeſt child of the family, is careſſed beyond all the reſt.

We may be ſure, therefore, that as ſoon as children are conſcious of this power, they will exerciſe it in ſuch ways as are ſuited to their age, and to the objects they are employed about. This gives riſe to innumerable new aſſociations, and regular trains of thought, which make the deeper impreſſion upon the mind, as they are its excluſive property.

I am aware that the power of invention is diſtributed among men more unequally than almoſt any other. When it is able to produce any thing that is intereſting to mankind, we call it genius; a talent which is the lot of very few. But there is perhaps a lower kind, or lower degree of invention that is more common. However this may be, it muſt be allowed, that the power of invention

CHAP. IV. in thoſe who have it, will produce many new regular trains of thought; and theſe being expreſſed in works of art, in writing, or in diſcourſe, will be copied by others.

Thus I conceive the minds of children, as ſoon as they have judgment to diſtinguiſh what is regular, orderly, and connected, from a mere medley of thought, are furniſhed with regular trains of thinking by theſe means.

Firſt and chiefly, by copying what they ſee in the works and in the diſcourſe of others. Man is the moſt imitative of all animals; he not only imitates with intention, and purpoſely, what he thinks has any grace or beauty, but even without intention, he is led by a kind of inſtinct, which it is difficult to reſiſt, into the modes of ſpeaking, thinking, and acting, which he has been accuſtomed to ſee in his early years. The more children ſee of what is regular and beautiful in what is preſented to them, the more they are led to obſerve and to imitate it.

This is the chief part of their ſtock, and deſcends to them by a kind of tradition from thoſe who came before them; and we ſhall find, that the fancy of moſt men is furniſhed from thoſe they have converſed with, as well as their religion, language, and manners.

Secondly, By the additions or innovations that are properly their own, theſe will be greater or leſs, in proportion to their ſtudy and invention; but in the bulk of mankind are not very conſiderable.

Every profeſſion, and every rank in life, has a manner of thinking, and turn of fancy that is proper to it; by which it is characteriſed in comedies and works of humour. The bulk of men of the ſame nation, of the ſame rank, and of the ſame occupation, are caſt as it were in the ſame mould. This mould itſelf changes gradually, but ſlowly, by new inventions, by intercourſe with ſtrangers, or by other accidents.

The

The condition of man requires a longer infancy and youth than that of other animals; for this reaſon among others, that almoſt every ſtation in civil ſociety requires a multitude of regular trains of thought, to be not only acquired, but to be made ſo familiar by frequent repetition, as to preſent themſelves ſpontaneouſly, when there is occaſion for them.

The imagination even of men of good parts never ſerves them readily but in things wherein it has been much exerciſed. A Miniſter of State holds a conference with a foreign Ambaſſador, with no greater emotion than a Profeſſor in a college prelects to his audience. The imagination of each preſents to him what the occaſion requires to be ſaid, and how. Let them change places, and both would find themſelves at a loſs.

The habits which the human mind is capable of acquiring by exerciſe are wonderful in many inſtances; in none more wonderful, than in that verſatility of imagination which a well bred man acquires, by being much exerciſed in the various ſcenes of life. In the morning he viſits a friend in affliction. Here his imagination brings forth from its ſtore every topic of conſolation; every thing that is agreeable to the laws of friendſhip and ſympathy, and nothing that is not ſo. From thence he drives to the Miniſter's levee, where imagination readily ſuggeſts what is proper to be ſaid or replied to every man, and in what manner, according to the degree of acquaintance or familiarity, of rank or dependence, of oppoſition or concurrence of intereſts, of confidence or diſtruſt, that is between them. Nor does all this employment hinder him from carrying on ſome deſign with much artifice, and endeavouring to penetrate into the views of others through the cloſeſt diſguiſes. From the levee he goes to the Houſe of Commons, and ſpeaks upon the affairs of the nation; from thence to a ball or aſſembly, and entertains the ladies. His imagination puts on the friend, the courtier, the patriot, the fine gentleman, with more eaſe than we put off one ſuit and put on another.

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This is the effect of training and exerciſe. For a man of equal parts and knowledge, but unaccuſtomed to thoſe ſcenes of public life, is quite diſconcerted when firſt brought into them. His thoughts are put to flight, and he cannot rally them.

There are feats of imagination to be learned by application and practice, as wonderful as the feats of balancers and rope-dancers, and often as uſeleſs.

When a man can make a hundred verſes ſtanding on one foot, or play three or four games at cheſs at the ſame time without ſeeing the board, it is probable he hath ſpent his life in acquiring ſuch a feat. However, ſuch unuſual phænomena ſhew what habits of imagination may be acquired.

When ſuch habits are acquired and perfected, they are exerciſed without any laborious effort; like the habit of playing upon an inſtrument of muſic. There are innumerable motions of the fingers upon the ſtops or keys, which muſt be directed in one particular train or ſucceſſion. There is only one arrangement of thoſe motions that is right, while there are ten thouſand that are wrong, and would ſpoil the muſic. The Muſician thinks not in the leaſt of the arrangement of thoſe motions; he has a diſtinct idea of the tune, and wills to play it. The motions of the fingers arrange themſelves, ſo as to anſwer his intention.

In like manner, when a man ſpeaks upon a ſubject with which he is acquainted, there is a certain arrangement of his thoughts and words neceſſary to make his diſcourſe ſenſible, pertinent, and grammatical. In every ſentence, there are more rules of grammar, logic, and rhetoric, that may be tranſgreſſed, than there are words and letters. He ſpeaks without thinking of any of thoſe rules, and yet obſerves them all, as if they were all in his eye.

This is a habit ſo ſimilar to that of a player on an inſtrument, that

that I think both muſt be got in the ſame way, that is, by much practice, and the power of habit.

When a man ſpeaks well and methodically upon a ſubject without ſtudy, and with perfect eaſe, I believe we may take it for granted that his thoughts run in a beaten track. There is a mould in his mind, which has been formed by much practice, or by ſtudy, for this very ſubject, or for ſome other ſo ſimilar and analogous, that his diſcourſe falls into this mould with eaſe, and takes its form from it.

Hitherto we have conſidered the operations of fancy that are either ſpontaneous, or at leaſt require no laborious effort to guide and direct them, and have endeavoured to account for that degree of regularity and arrangement which is found even in them. The natural powers of judgment and invention, the pleaſure that always attends the exerciſe of thoſe powers, the means we have of improving them by imitation of others, and the effect of practice and habits, ſeems to me ſufficiently to account for this phænomenon, without ſuppoſing any unaccountable attractions of ideas by which they arrange themſelves.

But we are able to direct our thoughts in a certain courſe ſo as to perform a deſtined taſk.

Every work of art has its model framed in the imagination. Here the Iliad of HOMER, the Republic of PLATO, the Principia of NEWTON, were fabricated. Shall we believe, that thoſe works took the form in which they now appear of themſelves? That the ſentiments, the manners, and the paſſions arranged themſelves at once in the mind of HOMER, ſo as to form the Iliad? Was there no more effort in the compoſition, than there is in telling a well-known tale, or ſinging a favourite ſong? This cannot be believed.

Granting that ſome happy thought firſt ſuggeſted the deſign of ſinging

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ſinging the wrath of ACHILLES; yet, ſurely, it was a matter of judgment and choice where the narration ſhould begin, and where it ſhould end.

Granting that the fertility of the Poet's imagination ſuggeſted a variety of rich materials; was not judgment neceſſary to ſelect what was proper, to reject what was improper, to arrange the materials into a juſt compoſition, and to adapt them to each other, and to the deſign of the whole?

No man can believe that HOMER's ideas, merely by certain ſympathies and antipathies, by certain attractions and repulſions inherent in their natures, arranged themſelves according to the moſt perfect rules of Epic poetry; and NEWTON's, according to the rules of mathematical compoſition.

I ſhould ſooner believe that the Poet, after he invoked his Muſe, did nothing at all but liſten to the ſong of the goddeſs. Poets indeed, and other artiſts, muſt make their works appear natural; but nature is the perfection of art, and there can be no juſt imitation of nature without art: When the building is finiſhed, the rubbiſh, the ſcaffolds, the tools and engines, are carried out of ſight; but we know it could not have been reared without them.

The train of thinking, therefore, is capable of being guided and directed, much in the ſame manner as the horſe we ride. The horſe has his ſtrength, his agility, and his mettle in himſelf; he has been taught certain movements, and many uſeful habits that make him more ſubſervient to our purpoſes, and obedient to our will; but to accompliſh a journey, he muſt be directed by the rider.

In like manner fancy has its original powers, which are very different in different perſons; it has likewiſe more regular motions, to which it has been trained by a long courſe of diſcipline and exerciſe; and by which it may *extempore*, and without much effort, produce

produce things that have a conſiderable degree of beauty, regularity, and deſign.

But the moſt perfect works of deſign are never extemporary. Our firſt thoughts are reviewed; we place them at a proper diſtance; examine every part, and take a complex view of the whole: By our critical faculties, we perceive this part to be redundant, that deficient; here is a want of nerves, there a want of delicacy; this is obſcure, that too diffuſe: Things are marſhalled anew, according to a ſecond and more deliberate judgment; what was deficient, is ſupplied; what was diſlocated, is put in joint; redundances are lopped off, and the whole poliſhed.

Though Poets of all artiſts make the higheſt claim to inſpiration, yet if we believe HORACE, a competent judge, no production in that art can have merit, which has not coſt ſuch labour as this in the birth.

Vos O!
Pompilius ſanguis, carmen reprehendite quod non
Multa dies, et multa litura coercuit, atque
Perfectum decies non caſtigavit ad unguem.

The concluſion I would draw from all that has been ſaid upon this ſubject is, That every thing that is regular in that train of thought, which we call fancy or imagination, from the little deſigns and reveries of children, to the grandeſt productions of human genius, was originally the offſpring of judgment or taſte, applied with ſome effort greater or leſs. What one perſon compoſed with art and judgment, is imitated by another with great eaſe. What a man himſelf at firſt compoſed with pains, becomes by habit ſo familiar, as to offer itſelf ſpontaneouſly to his fancy afterwards: But nothing that is regular, was ever at firſt conceived, without deſign, attention, and care.

CHAP. IV.

I ſhall now make a few reflections upon a theory which has been applied to account for this ſucceſſive train of thought in the mind. It was hinted by Mr HOBBES, but has drawn more attention ſince it was diſtinctly explained by Mr HUME.

That author thinks that the train of thought in the mind is owing to a kind of attraction which ideas have for other ideas that bear certain relations to them. He thinks the complex ideas, which are the common ſubjects of our thoughts and reaſoning, are owing to the ſame cauſe. The relations which produce this attraction of ideas, he thinks, are theſe three only, to wit, cauſation, contiguity in time or place, and ſimilitude. He aſſerts that theſe are the only general principles that unite ideas. And having, in another place, occaſion to take notice of contrariety as a principle of connection among ideas, in order to reconcile this to his ſyſtem, he tells us gravely, that contrariety may perhaps be conſidered as a mixture of cauſation and reſemblance. That ideas which have any of theſe three relations do mutually attract each other, ſo that one of them being preſented to the fancy, the other is drawn along with it, this he ſeems to think an original property of the mind, or rather of the ideas, and therefore inexplicable.

Firſt, I obſerve with regard to this theory, that although it is true that the thought of any object is apt to lead us to the thought of its cauſe or effect, of things contiguous to it in time or place, or of things reſembling it, yet this enumeration of the relations of things which are apt to lead us from one object to another, is very inaccurate.

The enumeration is too large upon his own principles; but it is by far too ſcanty in reality. Cauſation, according to his philoſophy, implies nothing more than a conſtant conjunction obſerved between the cauſe and the effect, and therefore contiguity muſt include cauſation, and his three principles of attraction are reduced to two.

But

But when we take all the three, the enumeration is in reality very incomplete. Every relation of things has a tendency, more or leſs, to lead the thought, in a thinking mind, from one to the other; and not only every relation, but every kind of contrariety and oppoſition. What Mr HUME ſays, that contrariety may perhaps be conſidered as a mixture "of cauſation and reſemblance," I can as little comprehend as if he had ſaid that figure may perhaps be conſidered as a mixture of colour and ſound.

Our thoughts paſs eaſily from the end to the means; from any truth to the evidence on which it is founded, the conſequences that may be drawn from it, or the uſe that may be made of it. From a part we are eaſily led to think of the whole, from a ſubject to its qualities, or from things related to the relation. Such tranſitions in thinking muſt have been made thouſands of times by every man who thinks and reaſons, and thereby become, as it were, beaten tracks for the imagination.

Not only the relations of objects to each other influence our train of thinking, but the relation they bear to the preſent temper and diſpoſition of the mind; their relation to the habits we have acquired, whether moral or intellectual; to the company we have kept, and to the buſineſs in which we have been chiefly employed. The ſame event will ſuggeſt very different reflections to different perſons, and to the ſame perſon at different times, according as he is in good or bad humour, as he is lively or dull, angry or pleaſed, melancholy or cheerful.

Lord KAMES, in his Elements of Criticiſm, and Dr GERARD in his Eſſay on Genius, have given a much fuller and juſter enumeration of the cauſes that influence our train of thinking, and I have nothing to add to what they have ſaid on this ſubject.

Secondly, Let us conſider how far this attraction of ideas muſt be reſolved into original qualities of human nature.

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I believe the original principles of the mind, of which we can give no account, but that ſuch is our conſtitution, are more in number than is commonly thought. But we ought not to multiply them without neceſſity.

That trains of thinking, which by frequent repetition have become familiar, ſhould ſpontaneouſly offer themſelves to our fancy, ſeems to require no other original quality but the power of habit.

In all rational thinking, and in all rational diſcourſe, whether ſerious or facetious, the thought muſt have ſome relation to what went before. Every man, therefore, from the dawn of reaſon, muſt have been accuſtomed to a train of related objects. Theſe pleaſe the underſtanding, and by cuſtom become like beaten tracks which invite the traveller.

As far as it is in our power to give a direction to our thoughts, which it is undoubtedly in a great degree, they will be directed by the active principles common to men, by our appetites, our paſſions, our affections, our reaſon, and conſcience. And that the trains of thinking in our minds are chiefly governed by theſe, according as one or another prevails at the time, every man will find in his experience.

If the mind is at any time vacant from every paſſion and deſire, there are ſtill ſome objects that are more acceptable to us than others. The facetious man is pleaſed with ſurpriſing ſimilitudes or contraſts; the Philoſopher with the relations of things that are ſubſervient to reaſoning; the Merchant with what tends to profit; and the Politician with what may mend the ſtate.

A good writer of comedy or romance can feign a train of thinking for any of the perſons of his fable, which appears very natural, and is approved by the beſt judges. Now, what is it that entitles ſuch a fiction to approbation? Is it that the author has given a nice attention to the relations of cauſation, contiguity, and ſimi-

litude

litude in the ideas? This ſurely is the leaſt part of its merit. But the chief part conſiſts in this, that it correſponds perfectly with the general character, the rank, the habits, the preſent ſituation and paſſions of the perſon. If this be a juſt way of judging in criticiſm, it follows neceſſarily, that the circumſtances laſt mentioned have the chief influence in ſuggeſting our trains of thought.

It cannot be denied, that the ſtate of the body has an influence upon our imagination, according as a man is ſober or drunk, as he is fatigued or refreſhed. Crudities and indigeſtion are ſaid to give uneaſy dreams, and have probably a like effect upon the waking thoughts. Opium gives to ſome perſons pleaſing dreams, and pleaſing imaginations when awake, and to others ſuch as are horrible and diſtreſſing.

Theſe influences of the body upon the mind can only be known by experience, and I believe we can give no account of them.

Nor can we, perhaps, give any reaſon why we muſt think without ceaſing while we are awake. I believe we are likewiſe originally diſpoſed, in imagination, to paſs from any one object of thought to others that are contiguous to it in time or place. This, I think, may be obſerved in brutes and in idiots, as well as in children, before any habit can be acquired that might account for it. The ſight of an object is apt to ſuggeſt to the imagination what has been ſeen or felt in conjunction with it, even when the memory of that conjunction is gone.

Such conjunctions of things influence not only the imagination, but the belief and the paſſions, eſpecially in children and in brutes; and perhaps all that we call memory in brutes is ſomething of this kind.

They expect events in the ſame order and ſucceſſion in which they happened before; and by this expectation, their actions and paſſions, as well as their thoughts, are regulated. A horſe takes

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fright at the place where ſome object frighted him before. We are apt to conclude from this, that he remembers the former accident. But perhaps there is only an aſſociation formed in his mind between the place and the paſſion of fear, without any diſtinct remembrance.

Mr LOCKE has given us a very good chapter upon the aſſociation of ideas; and by the examples he has given to illuſtrate this doctrine, I think it appears that very ſtrong aſſociations may be formed at once; not of ideas to ideas only, but of ideas to paſſions and emotions; and that ſtrong aſſociations are never formed at once, but when accompanied by ſome ſtrong paſſion or emotion. I believe this muſt be reſolved into the conſtitution of our nature.

Mr HUME's opinion, that the complex ideas, which are the common objects of diſcourſe and reaſoning, are formed by thoſe original attractions of ideas, to which he aſcribes the train of thoughts in the mind, will come under conſideration in another place.

To put an end to our remarks upon this theory of Mr HUME, I think he has real merit in bringing this curious ſubject under the view of Philoſophers, and carrying it a certain length. But I ſee nothing in this theory that ſhould hinder us to conclude, that every thing in the trains of our thought, which bears the marks of judgment and reaſon, has been the product of judgment and reaſon previouſly exerciſed, either by the perſon himſelf, at that or ſome former time, or by ſome other perſon. The attraction of ideas will be the ſame in a man's ſecond thoughts upon any ſubject as in his firſt. Or if ſome change in his circumſtances, or in the objects about him, ſhould make any change in the attractions of his ideas, it is an equal chance whether the ſecond be better than the firſt, or whether they be worſe. But it is certain that every man of judgment and taſte will, upon a review, correct that train of thought which firſt preſented itſelf. If the attractions of ideas are the ſole cauſes of the regular arrangement of thought in the fancy, there is no uſe for judgment or taſte in any compoſition, nor indeed any room for their operation.

There

There are other reflections of a more practical nature, and of higher importance, to which this ſubject leads.

I believe it will be allowed by every man, that our happineſs or miſery in life, that our improvement in any art or ſcience which we profeſs, and that our improvement in real virtue and goodneſs, depend in a very great degree on the train of thinking, that occupies the mind both in our vacant and in our more ſerious hours. As far therefore as the direction of our thoughts is in our power, (and that it is ſo in a great meaſure, cannot be doubted) it is of the laſt importance to give them that direction which is moſt ſubſervient to thoſe valuable purpoſes.

What employment can *he* have worthy of a man, whoſe imagination is occupied only about things low and baſe, and grovels in a narrow field of mean unanimating and unintereſting objects, inſenſible to thoſe finer and more delicate ſentiments, and blind to thoſe more enlarged and nobler views which elevate the ſoul, and make it conſcious of its dignity.

How different from him, whoſe imagination, like an eagle in her flight, takes a wide proſpect, and obſerves whatever it preſents, that is new or beautiful, grand or important; whoſe rapid wing varies the ſcene every moment, carrying him ſometimes through the fairy regions of wit and fancy, ſometimes through the more regular and ſober walks of ſcience and philoſophy.

The various objects which he ſurveys, according to their different degrees of beauty and dignity, raiſe in him the lively and agreeable emotions of taſte. Illuſtrious human characters, as they paſs in review, clothed with their moral qualities, touch his heart ſtill more deeply. They not only awaken the ſenſe of beauty, but excite the ſentiment of approbation, and kindle the glow of virtue.

While he views what is truly great and glorious in human conduct, his ſoul catches the divine flame, and burns with deſire to emulate what it admires.

The

CHAP. IV. The human imagination is an ample theatre, upon which every thing in human life, good or bad, great or mean, laudable or baſe, is acted.

In children, and in ſome frivolous minds, it is a mere toy-ſhop. And in ſome, who exerciſe their memory without their judgment, its furniture is made up of old ſcraps of knowledge, that are thread-bare and worn out.

In ſome, this theatre is often occupied by ghaſtly ſuperſtition, with all her train of *Gorgons, and Hydras, and Chimeras dire.* Sometimes it is haunted with all the infernal demons, and made the forge of plots, and rapine, and murder. Here every thing that is black and deteſtable is firſt contrived, and a thouſand wicked deſigns conceived that are never executed. Here, too, the Furies act their part, taking a ſevere though ſecret vengeance upon the ſelf-condemned criminal.

How happy is that mind, in which the light of real knowledge diſpels the phantoms of ſuperſtition: In which the belief and reverence of a perfect all-governing Mind caſts out all fear but the fear of acting wrong: In which ſerenity and cheerfulneſs, innocence, humanity, and candour, guard the imagination againſt the entrance of every unhallowed intruder, and invite more amiable and worthier gueſts to dwell!

There ſhall the Muſes, the Graces, and the Virtues, fix their abode; for every thing that is great and worthy in human conduct muſt have been conceived in the imagination before it was brought into act. And many great and good deſigns have been formed there, which, for want of power and opportunity, have proved abortive.

The man, whoſe imagination is occupied by theſe gueſts, muſt be wiſe; he muſt be good; and he muſt be happy.

ESSAY V.

OF ABSTRACTION.

CHAP. I.

Of General Words.

THE words we uſe in language are either general words, or proper names. Proper names are intended to ſignify one individual only. Such are the names of men, kingdoms, provinces, cities, rivers, and of every other creature of God, or work of man, which we chuſe to diſtinguiſh from all others of the kind, by a name appropriated to it. All the other words of language are general words, not appropriated to ſignify any one individual thing, but equally related to many.

Under general words therefore, I comprehend not only thoſe which Logicians call general terms, that is, ſuch general words as may make the ſubject or the predicate of a propoſition, but likewiſe their auxiliaries or acceſſories, as the learned Mr HARRIS calls them; ſuch as prepoſitions, conjunctions, articles, which are all general words, though they cannot properly be called general terms.

In every language, rude or poliſhed, general words make the greateſt part, and proper names the leaſt. Grammarians have reduced all words to eight or nine claſſes, which are called parts of ſpeech. Of theſe there is only one, to wit, that of *nouns*, wherein proper

CHAP. I. proper names are found. All *pronouns*, *verbs*, *participles*, *adverbs*, *articles*, *prepoſitions*, *conjunctions*, and *interjections*, are general words. Of *nouns*, all *adjectives* are general words, and the greater part of *ſubſtantives*. Every ſubſtantive that has a plural number, is a general word; for no proper name can have a plural number, becauſe it ſignifies only one individual. In all the fifteen books of EUCLID's Elements, there is not one word that is not general; and the ſame may be ſaid of many large volumes.

At the ſame time it muſt be acknowledged, that all the objects we perceive are individuals. Every object of ſenſe, of memory, or of conſciouſneſs, is an individual object. All the good things we enjoy or deſire, and all the evils we feel or fear, muſt come from individuals; and I think we may venture to ſay, that every creature which God has made, in the heavens above, or in the earth beneath, or in the waters under the earth, is an individual.

How comes it to paſs then, that in all languages general words make the greateſt part of the language, and proper names but a very ſmall and inconſiderable part of it?

This ſeemingly ſtrange phænomenon may, I think, be eaſily accounted for by the following obſervations.

Firſt, Though there be a few individuals that are obvious to the notice of all men, and therefore have proper names in all languages; ſuch as the ſun and moon, the earth and ſea; yet the greateſt part of the things to which we think fit to give proper names are local; known perhaps to a village or to a neighbourhood, but unknown to the greater part of thoſe who ſpeak the ſame language, and to all the reſt of mankind. The names of ſuch things being confined to a corner, and having no names anſwering to them in other languages, are not accounted a part of the language, any more than the cuſtoms of a particular hamlet are accounted part of the law of the nation.

For

For this reaſon, there are but few proper names that belong to a language. It is next to be conſidered why there muſt be many general words in every language.

Secondly, It may be obſerved, that every individual object that falls within our view has various attributes; and it is by them that it becomes uſeful or hurtful to us: We know not the eſſence of any individual object; all the knowledge we can attain of it, is the knowledge of its attributes; its quantity, its various qualities, its various relations to other things, its place, its ſituation, and motions. It is by ſuch attributes of things only that we can communicate our knowledge of them to others: By their attributes, our hopes or fears from them are regulated; and it is only by attention to their attributes that we can make them ſubſervient to our ends; and therefore we give names to ſuch attributes.

Now all attributes muſt from their nature be expreſſed by general words, and are ſo expreſſed in all languages. In the ancient philoſophy, attributes in general were called by two names which expreſs their nature. They were called *univerſals*, becauſe they might belong equally to many individuals, and are not confined to one: They were alſo called *predicables*, becauſe whatever is predicated, that is, affirmed or denied of one ſubject, may be, of more, and therefore is an univerſal, and expreſſed by a general word. A predicable therefore ſignifies the ſame thing as an attribute, with this difference only, that the firſt is Latin, the laſt Engliſh. The attributes we find either in the creatures of God, or in the works of men, are common to many individuals: We either find it to be ſo, or preſume it may be ſo, and give them the ſame name in every ſubject to which they belong.

There are not only attributes belonging to individual ſubjects, but there are likewiſe attributes of attributes, which may be called ſecondary attributes. Moſt attributes are capable of different degrees, and different modifications, which muſt be expreſſed by general words.

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Thus it is an attribute of many bodies to be moved; but motion may be in an endleſs variety of directions. It may be quick or ſlow, rectilineal or curvilineal; it may be equable, or accelerated, or retarded.

As all attributes, therefore, whether primary or ſecondary, are expreſſed by general words, it follows, that in every propoſition we expreſs in language, what is affirmed or denied of the ſubject of the propoſition muſt be expreſſed by general words: And that the ſubject of the propoſition may often be a general word, will appear from the next obſervation.

Thirdly, The ſame faculties by which we diſtinguiſh the different attributes belonging to the ſame ſubject, and give names to them, enable us likewiſe to obſerve, that many ſubjects agree in certain attributes, while they differ in others. By this means we are enabled to reduce individuals which are infinite, to a limited number of claſſes, which are called kinds and ſorts; and in the ſcholaſtic language, *genera* and *ſpecies*.

Obſerving many individuals to agree in certain attributes, we refer them all to one claſs, and give a name to the claſs: This name comprehends in its ſignification not one attribute only, but all the attributes which diſtinguiſh that claſs; and by affirming this name of any individual, we affirm it to have all the attributes which characterize the claſs: Thus men, dogs, horſes, elephants, are ſo many different claſſes of animals. In like manner we marſhal other ſubſtances, vegetable and inanimate, into claſſes.

Nor is it only ſubſtances that we thus form into claſſes. We do the ſame with regard to qualities, relations, actions, affections, paſſions, and all other things.

When a claſs is very large, it is divided into ſubordinate claſſes in the ſame manner. The higher claſs is called a *genus* or kind; the

the lower a *ſpecies* or ſort of the higher: Sometimes a ſpecies is ſtill ſubdivided into ſubordinate ſpecies; and this ſubdiviſion is carried on as far as is found convenient for the purpoſe of language, or for the improvement of knowledge.

In this diſtribution of things into *genera* and *ſpecies*, it is evident that the name of the ſpecies comprehends more attributes than the name of the genus. The ſpecies comprehends all that is in the genus, and thoſe attributes likewiſe which diſtinguiſh that ſpecies from others belonging to the ſame genus; and the more ſubdiviſions we make, the names of the lower become ſtill the more comprehenſive in their ſignification, but the leſs extenſive in their application to individuals.

Hence it is an axiom in logic, that the more extenſive any general term is, it is the leſs comprehenſive; and on the contrary, the more comprehenſive, the leſs extenſive: Thus, in the following ſeries of ſubordinate general terms, animal, man, Frenchman, Pariſian, every ſubſequent term comprehends in its ſignification all that is in the preceding, and ſomething more; and every antecedent term extends to more individuals than the ſubſequent.

Such diviſions and ſubdiviſions of things into *genera* and *ſpecies* with general names, are not confined to the learned and poliſhed languages; they are found in thoſe of the rudeſt tribes of mankind: From which we learn, that the invention and the uſe of general words, both to ſignify the attributes of things, and to ſignify the *genera* and *ſpecies* of things, is not a ſubtile invention of Philoſophers, but an operation which all men perform by the light of common ſenſe. Philoſophers may ſpeculate about this operation, and reduce it to canons and aphoriſms; but men of common underſtanding, without knowing any thing of the philoſophy of it, can put it in practice; in like manner as they can ſee objects, and make good uſe of their eyes, although they know nothing of the ſtructure of the eye, or of the theory of viſion.

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Every genus, and every ſpecies of things, may be either the ſubject or the predicate of a propoſition, nay of innumerable propoſitions; for every attribute common to the genus or ſpecies may be affirmed of it; and the genus may be affirmed of every ſpecies, and both genus and ſpecies of every individual to which it extends.

Thus of man it may be affirmed, that he is an animal made up of body and mind; that he is of few days, and full of trouble; that he is capable of various improvements in arts, in knowledge, and in virtue. In a word, every thing common to the ſpecies may be affirmed of man; and of all ſuch propoſitions, which are innumerable, man is the ſubject.

Again, of every nation and tribe, and of every individual of the human race that is, or was, or ſhall be, it may be affirmed that they are men. In all ſuch propoſitions, which are innumerable, man is the predicate of the propoſition.

We obſerved above an extenſion and a comprehenſion in general terms; and that in any ſubdiviſion of things the name of the loweſt ſpecies is moſt comprehenſive, and that of the higheſt genus moſt extenſive. I would now obſerve, that, by means of ſuch general terms, there is alſo an extenſion and comprehenſion of propoſitions, which is one of the nobleſt powers of language, and fits it for expreſſing, with great eaſe and expedition, the higheſt attainments in knowledge, of which the human underſtanding is capable.

When the predicate is a *genus* or a *ſpecies*, the propoſition is more or leſs comprehenſive, according as the predicate is. Thus, when I ſay that this ſeal is gold, by this ſingle propoſition, I affirm of it all the properties which that metal is known to have. When I ſay of any man that he is a Mathematician, this appellation comprehends all the attributes that belong to him as an animal, as a man, and as one who has ſtudied mathematics. When I ſay that the orbit of the planet Mercury is an ellipſis, I thereby affirm of that orbit

bit all the properties which APOLLONIUS and other Geometricians have diſcovered, or may diſcover, of that ſpecies of figure. CHAP. I.

Again, when the ſubject of a propoſition is a *genus* or a *ſpecies*, the propoſition is more or leſs extenſive, according as the ſubject is. Thus when I am taught, that the three angles of a plane triangle are equal to two right angles, this properly extends to every ſpecies of plane triangle, and to every individual plane triangle that did, or does, or can exiſt.

It is by means of ſuch extenſive and comprehenſive propoſitions that human knowledge is condenſed, as it were, into a ſize adapted to the capacity of the human mind, with great addition to its beauty, and without any diminution of its diſtinctneſs and perſpicuity.

General propoſitions in ſcience may be compared to the ſeed of a plant, which, according to ſome Philoſophers, has not only the whole future plant incloſed within it, but the ſeeds of that plant, and the plants that ſhall ſpring from them through all future generations.

But the ſimilitude falls ſhort in this reſpect, that time and accidents, not in our power, muſt concur to diſcloſe the contents of the ſeed, and bring them into our view; whereas the contents of a general propoſition may be brought forth, ripened, and expoſed to view at our pleaſure, and in an inſtant.

Thus the wiſdom of ages, and the moſt ſublime theorems of ſcience, may be laid up, like an Iliad in a nut-ſhell, and tranſmitted to future generations. And this noble purpoſe of language can only be accompliſhed, by means of general words annexed to the diviſions and ſubdiviſions of things.

What has been ſaid in this chapter, I think, is ſufficient to ſhew, that

CHAP. I. that there can be no language, not ſo much as a ſingle propoſition, without general words; that they muſt make the greateſt part of every language, and that it is by them only that language is fitted to expreſs, with wonderful eaſe and expedition, all the treaſures of human wiſdom and knowledge.

CHAP. II.

Of general Conceptions.

AS general words are ſo neceſſary in language, it is natural to conclude that there muſt be general conceptions, of which they are the ſigns.

Words are empty ſounds when they do not ſignify the thoughts of the ſpeaker; and it is only from their ſignification that they are denominated general. Every word that is ſpoken, conſidered merely as a ſound, is an individual ſound. And it can only be called a general word, becauſe that which it ſignifies is general. Now, that which it ſignifies, is conceived by the mind both of the ſpeaker and hearer, if the word have a diſtinct meaning, and be diſtinctly underſtood. It is therefore impoſſible that words can have a general ſignification, unleſs there be conceptions in the mind of the ſpeaker, and of the hearer, of things that are general. It is to ſuch that I give the name of general conceptions: And it ought to be obſerved, that they take this denomination, not from the act of the mind in conceiving, which is an individual act, but from the object, or thing conceived, which is general.

We are therefore here to conſider whether we have ſuch general conceptions, and how they are formed.

To begin with the conceptions expreſſed by general terms, that is,

is, by ſuch general words as may be the ſubject or the predicate of a propoſition. They are either attributes of things, or they are *genera* or *ſpecies* of things.

It is evident, with reſpect to all the individuals we are acquainted with, that we have a more clear and diſtinct conception of their attributes, than of the ſubject to which thoſe attributes belong.

Take, for inſtance, any individual body we have acceſs to know, what conception do we form of it? Every man may know this from his conſciouſneſs. He will find that he conceives it as a thing that has length, breadth, and thickneſs, ſuch a figure, and ſuch a colour; that it is hard, or ſoft, or fluid; that it has ſuch qualities, and is fit for ſuch purpoſes. If it is a vegetable, he may know where it grew, what is the form of its leaves, and flower, and ſeed. If an animal, what are its natural inſtincts, its manner of life, and of rearing its young: Of theſe attributes belonging to this individual, and numberleſs others, he may ſurely have a diſtinct conception; and he will find words in language by which he can clearly and diſtinctly expreſs each of them.

If we conſider, in like manner, the conception we form of any individual perſon of our acquaintance, we ſhall find it to be made up of various attributes, which we aſcribe to him; ſuch as, that he is the ſon of ſuch a man, the brother of ſuch another, that he has ſuch an employment or office, has ſuch a fortune, that he is tall or ſhort, well or ill made, comely or ill favoured, young or old, married or unmarried; to this we may add, his temper, his character, his abilities, and perhaps ſome anecdotes of his hiſtory.

Such is the conception we form of individual perſons of our acquaintance. By ſuch attributes we deſcribe them to thoſe who know them not; and by ſuch attributes Hiſtorians give us a conception of

CHAP. II. of the perſonages of former times. Nor is it poſſible to do it in any other way.

All the diſtinct knowledge we have or can attain of any individual, is the knowledge of its attributes: For we know not the eſſence of any individual. This ſeems to be beyond the reach of the human faculties.

Now, every attribute is what the ancients called an univerſal. It is, or may be, common to various individuals. There is no attribute belonging to any creature of God which may not belong to others; and, on this account, attributes, in all languages, are expreſſed by general words.

It appears likewiſe, from every man's experience, that he may have as clear and diſtinct a conception of ſuch attributes as we have named, and of innumerable others, as he can have of any individual to which they belong.

Indeed, the attributes of individuals is all that we diſtinctly conceive about them. It is true, we conceive a ſubject to which the attributes belong; but of this ſubject, when its attributes are ſet aſide, we have but an obſcure and relative conception, whether it be body or mind.

This was before obſerved with regard to bodies, Eſſay II. chap. 19. to which we refer, and it is no leſs evident with regard to minds. What is it we call a mind? It is a thinking, intelligent, active being. Granting that thinking, intelligence, and activity, are attributes of mind, I want to know what the thing or being is to which theſe attributes belong? To this queſtion I can find no ſatisfying anſwer. The attributes of mind, and particularly its operations, we know clearly; but of the thing itſelf we have only an obſcure notion.

Nature

Nature teaches us, that thinking and reaſoning are attributes, which cannot exiſt without a ſubject; but of that ſubject I believe the beſt notion we can form implies little more than that it is the ſubject of ſuch attributes.

Whether other created beings may have the knowledge of the real eſſence of created things, ſo as to be able to deduce their attributes from their eſſence and conſtitution, or whether this be the prerogative of him who made them, we cannot tell; but it is a knowledge which ſeems to be quite beyond the reach of the human faculties.

We know the eſſence of a triangle, and from that eſſence can deduce its properties. It is an univerſal, and might have been conceived by the human mind, though no individual triangle had ever exiſted. It has only what Mr LOCKE calls a nominal eſſence, which is expreſſed in its definition. But every thing that exiſts has a real eſſence, which is above our comprehenſion; and therefore we cannot deduce its properties or attributes from its nature, as we do in the triangle. We muſt take a contrary road in the knowledge of God's works, and ſatisfy ourſelves with their attributes as facts, and with the general conviction that there is a ſubject to which thoſe attributes belong.

Enough, I think, has been ſaid, to ſhow, not only that we may have clear and diſtinct conceptions of attributes, but that they are the only things, with regard to individuals, of which we have a clear and diſtinct conception.

The other claſs of general terms are thoſe that ſignify the *genera* and *ſpecies* into which we divide and ſubdivide things. And if we be able to form diſtinct conceptions of attributes, it cannot ſurely be denied that we may have diſtinct conceptions of *genera* and *ſpecies*; becauſe they are only collections of attributes which we conceive to exiſt in a ſubject, and to which we give a general

CHAP. II.

name. If the attributes comprehended under that general name be diſtinctly conceived, the thing meant by the name muſt be diſtinctly conceived. And the name may juſtly be attributed to every individual which has thoſe attributes.

Thus, I conceive diſtinctly what it is to have wings, to be covered with feathers, to lay eggs. Suppoſe then that we give the name of *bird* to every animal that has theſe three attributes. Here undoubtedly my conception of a bird is as diſtinct as my notion of the attributes which are common to this ſpecies: And if this be admitted to be the definition of a bird, there is nothing I conceive more diſtinctly. If I had never ſeen a bird, and can but be made to underſtand the definition, I can eaſily apply it to every individual of the ſpecies, without danger of miſtake.

When things are divided and ſubdivided by men of ſcience, and names given to the *genera* and *ſpecies*, thoſe names are defined. Thus, the genera and ſpecies of plants, and of other natural bodies, are accurately defined by the writers in the various branches of natural hiſtory; ſo that, to all future generations, the definition will convey a diſtinct notion of the genus or ſpecies defined.

There are, without doubt, many words ſignifying genera and ſpecies of things, which have a meaning ſomewhat vague and indiſtinct; ſo that thoſe who ſpeak the ſame language do not always uſe them in the ſame ſenſe. But if we attend to the cauſe of this indiſtinctneſs, we ſhall find, that it is not owing to their being general terms, but to this, that there is no definition of them that has authority. Their meaning, therefore, has not been learned by a definition, but by a kind of induction, by obſerving to what individuals they are applied by thoſe who underſtand the language. We learn by habit to uſe them as we ſee others do, even when we have not a preciſe meaning annexed to them. A man may know, that to certain individuals they may be applied with propriety; but whether they can be applied to certain other individuals,

individuals, he may be uncertain, either from want of good authorities, or from having contrary authorities, which leave him in doubt.

Thus, a man may know, that when he applies the name of beaſt to a lion or a tyger, and the name of bird to an eagle or a turkey, he ſpeaks properly. But whether a bat be a bird or a beaſt, he may be uncertain. If there was any accurate definition of a beaſt and of a bird, that was of ſufficient authority, he could be at no loſs.

It is ſaid to have been ſometimes a matter of diſpute, with regard to a monſtrous birth of a woman, whether it was a man or not. Although this be in reality a queſtion about the meaning of a word, it may be of importance, on account of the privileges which laws have annexed to the human character. To make ſuch laws perfectly preciſe, the definition of a man would be neceſſary, which I believe Legiſlators have ſeldom or never thought fit to give. It is, indeed, very difficult to fix a definition of ſo common a word, and the caſes wherein it would be of any uſe ſo rarely occur, that perhaps it may be better, when they do occur, to leave them to the determination of a judge or of a jury, than to give a definition, which might be attended with unforeſeen conſequences.

A genus or ſpecies, being a collection of attributes, conceived to exiſt in one ſubject, a definition is the only way to prevent any addition or diminution of its ingredients in the conception of different perſons; and when there is no definition that can be appealed to as a ſtandard, the name will hardly retain the moſt perfect preciſion in its ſignification.

From what has been ſaid, I conceive it is evident, that the words which ſignify genera and ſpecies of things have often as preciſe and definite a ſignification as any words whatſoever; and that

CHAP. II. when it is otherwiſe, their want of preciſion is not owing to their being general words, but to other cauſes.

Having ſhewn that we may have a perfectly clear and diſtinct conception of the meaning of general terms, we may, I think, take it for granted, that the ſame may be ſaid of other general words, ſuch as prepoſitions, conjunctions, articles. My deſign at preſent being only to ſhew, that we have general conceptions no leſs clear and diſtinct than thoſe of individuals, it is ſufficient for this purpoſe, if this appears with regard to the conceptions expreſſed by general terms. To conceive the meaning of a general word, and to conceive that which it ſignifies, is the ſame thing. We conceive diſtinctly the meaning of general terms, therefore we conceive diſtinctly that which they ſignify. But ſuch terms do not ſignify any individual, but what is common to many individuals; therefore we have a diſtinct conception of things common to many individuals, that is, we have diſtinct general conceptions.

We muſt here beware of the ambiguity of the word *conception*, which ſometimes ſignifies the act of the mind in conceiving, ſometimes the thing conceived, which is the object of that act. If the word be taken in the firſt ſenſe, I acknowledge that every act of the mind is an individual act; the univerſality, therefore, is not in the act of the mind, but in the object, or thing conceived. The thing conceived is an attribute common to many ſubjects, or it is a genus or ſpecies common to many individuals.

Suppoſe I conceive a triangle, that is, a plain figure terminated by three right lines. He that underſtands this definition diſtinctly has a diſtinct conception of a triangle. But a triangle is not an individual; it is a ſpecies. The act of my underſtanding in conceiving it is an individual act, and has a real exiſtence; but the thing conceived is general, and cannot exiſt without other attributes, which are not included in the definition.

Every

Every triangle that really exiſts muſt have a certain length of ſides and meaſure of angles; it muſt have place and time. But the definition of a triangle includes neither exiſtence, nor any of thoſe attributes; and therefore they are not included in the conception of a triangle, which cannot be accurate if it comprehend more than the definition.

Thus I think it appears to be evident, that we have general conceptions that are clear and diſtinct, both of attributes of things, and of genera and ſpecies of things.

CHAP. III.

Of general Conceptions formed by analyſing Objects.

WE are next to conſider the operations of the underſtanding, by which we are enabled to form general conceptions.

Theſe appear to me to be three; *firſt*, The reſolving or analyſing a ſubject into its known attributes, and giving a name to each attribute, which name ſhall ſignify that attribute, and nothing more.

Secondly, The obſerving one or more ſuch attributes to be common to many ſubjects. The firſt is by Philoſophers called *abſtraction*; the ſecond may be called *generaliſing*; but both are commonly included under the name of *abſtraction*.

It is difficult to ſay which of them goes firſt, or whether they are not ſo cloſely connected that neither can claim the precedence. For on the one hand, to perceive an agreement between two or more objects in the ſame attribute, ſeems to require nothing more than

CHAP. III. than to compare them together. A ſavage, upon ſeeing ſnow and chalk, would find no difficulty in perceiving that they have the ſame colour. Yet, on the other hand, it ſeems impoſſible that he ſhould obſerve this agreement without abſtraction, that is, diſtinguiſhing in his conception the colour, wherein thoſe two objects agree, from the other qualities wherein they diſagree.

It ſeems therefore, that we cannot generaliſe without ſome degree of abſtraction; but I apprehend we may abſtract without generaliſing: For what hinders me from attending to the whiteneſs of the paper before me, without applying that colour to any other object: The whiteneſs of this individual object is an abſtract conception, but not a general one, while applied to one individual only. Theſe two operations, however, are ſubſervient to each other; for the more attributes we obſerve and diſtinguiſh in any one individual, the more agreements we ſhall diſcover between it and other individuals.

A *third* operation of the underſtanding, by which we form abſtract conceptions, is the combining into one whole a certain number of thoſe attributes of which we have formed abſtract notions, and giving a name to that combination. It is thus we form abſtract notions of the genera and ſpecies of things. Theſe three operations we ſhall conſider in order.

With regard to abſtraction, ſtrictly ſo called, I can perceive nothing in it that is difficult either to be underſtood or practiſed. What can be more eaſy than to diſtinguiſh the different attributes which we know to belong to a ſubject? In a man, for inſtance, to diſtinguiſh his ſize, his complexion, his age, his fortune, his birth, his profeſſion, and twenty other things that belong to him. To think and ſpeak of theſe things with underſtanding, is ſurely within the reach of every man endowed with the human faculties.

There may be diſtinctions that require nice diſcernment, or an acquaintance with the ſubject that is not common. Thus, a critic in

in painting may diſcern the ſtyle of RAPHAEL or TITIAN, when another man could not. A lawyer may be acquainted with many diſtinctions in crimes, and contracts, and actions, which never occurred to a man who has not ſtudied law. One man may excel another in the talent of diſtinguiſhing, as he may in memory or in reaſoning; but there is a certain degree of this talent, without which a man would have no title to be conſidered as a reaſonable creature.

It ought likewiſe to be obſerved, that attributes may with perfect eaſe be diſtinguiſhed and disjoined in our conception, which cannot be actually ſeparated in the ſubject. Thus, in a body, I can diſtinguiſh its ſolidity from its extenſion, and its weight from both. In extenſion I can diſtinguiſh length, breadth, and thickneſs, yet none of theſe can be ſeparated from the body, or from one another. There may be attributes belonging to a ſubject, and inſeparable from it, of which we have no knowledge, and conſequently no conception; but this does not hinder our conceiving diſtinctly thoſe of its attributes which we know.

Thus, all the properties of a circle are inſeparable from the nature of a circle, and may be demonſtrated from its definition; yet a man may have a perfectly diſtinct notion of a circle, who knows very few of thoſe properties of it which Mathematicians have demonſtrated; and a circle probably has many properties which no Mathematician ever dreamed of.

It is therefore certain, that attributes, which in their nature are abſolutely inſeparable from their ſubject, and from one another, may be disjoined in our conception; one cannot exiſt without the other, but one can be conceived without the other.

Having conſidered abſtraction, ſtrictly ſo called, let us next conſider the operation of generaliſing, which is nothing but the obſerving one or more attributes to be common to many ſubjects.

If

CHAP. III. If any man can doubt whether there be attributes that are really common to many individuals, let him conſider whether there be not many men that are above ſix feet high, and many below it; whether there be not many men that are rich, and many more that are poor; whether there be not many that were born in Britain, and many that were born in France. To multiply inſtances of this kind, would be to affront the reader's underſtanding. It is certain therefore, that there are innumerable attributes that are really common to many individuals; and if this be what the ſchoolmen called *univerſale a parte rei*, we may affirm with certainty, that there are ſuch univerſals.

There are ſome attributes expreſſed by general words, of which this may ſeem more doubtful. Such are the qualities which are inherent in their ſeveral ſubjects. It may be ſaid that every ſubject hath its own qualities, and that which is the quality of one ſubject cannot be the quality of another ſubject. Thus the whiteneſs of the ſheet of paper upon which I write, cannot be the whiteneſs of another ſheet, though both are called white. The weight of one guinea is not the weight of another guinea, though both are ſaid to have the ſame weight.

To this I anſwer, that the whiteneſs of this ſheet is one thing, whiteneſs is another; the conceptions ſignified by theſe two forms of ſpeech are as different as the expreſſions: The firſt ſignifies an individual quality really exiſting, and is not a general conception, though it be an abſtract one: The ſecond ſignifies a general conception, which implies no exiſtence, but may be predicated of every thing that is white, and in the ſame ſenſe. On this account, if one ſhould ſay, that the whiteneſs of this ſheet is the whiteneſs of another ſheet, every man perceives this to be abſurd; but when he ſays both ſheets are white, this is true and perfectly underſtood. The conception of whiteneſs implies no exiſtence; it would remain the ſame, though every thing in the univerſe that is white were annihilated.

It

It appears therefore, that the general names of qualities, as well as of other attributes, are applicable to many individuals in the ſame ſenſe, which cannot be if there be not general conceptions ſignified by ſuch names.

If it ſhould be aſked, how early, or at what period of life, men begin to form general conceptions? I anſwer, As ſoon as a child can ſay, with underſtanding, that he has two brothers or two ſiſters; as ſoon as he can uſe the plural number, he muſt have general conceptions; for no individual can have a plural number.

As there are not two individuals in nature that agree in every thing, ſo there are very few that do not agree in ſome things. We take pleaſure from very early years in obſerving ſuch agreements. One great branch of what we call *wit*, which when innocent, gives pleaſure to every good natured man, conſiſts in diſcovering unexpected agreements in things. The author of HUDIBRAS could diſcern a property common to the morning and a boiled lobſter, that both turn from black to red. SWIFT could ſee ſomething common to wit and an old cheeſe. Such unexpected agreements may ſhew wit; but there are innumerable agreements of things which cannot eſcape the notice of the loweſt underſtanding; ſuch as agreements in colour, magnitude, figure, features, time, place, age, and ſo forth. Theſe agreements are the foundation of ſo many common attributes, which are found in the rudeſt languages.

The ancient Philoſophers called theſe univerſals, or predicables, and endeavoured to reduce them to five claſſes; to wit, genus, ſpecies, ſpecific difference, properties, and accidents. Perhaps there may be more claſſes of univerſals or attributes, for enumerations, ſo very general, are ſeldom complete; but every attribute, common to ſeveral individuals, may be expreſſed by a general term, which is the ſign of a general conception.

How prone men are to form general conceptions we may ſee from

CHAP. III. the uſe of metaphor, and of the other figures of ſpeech grounded on ſimilitude. Similitude is nothing elſe than an agreement of the objects compared in one or more attributes; and if there be no attribute common to both, there can be no ſimilitude.

The ſimilitudes and analogies between the various objects that nature preſents to us, are infinite and inexhauſtible. They not only pleaſe, when diſplayed by the Poet or Wit in works of taſte, but they are highly uſeful in the ordinary communication of our thoughts and ſentiments by language. In the rude languages of barbarous nations, ſimilitudes and analogies ſupply the want of proper words to expreſs mens ſentiments, ſo much, that in ſuch languages there is hardly a ſentence without a metaphor; and if we examine the moſt copious and poliſhed languages, we ſhall find that a great proportion of the words and phraſes which are accounted the moſt proper, may be ſaid to be the progeny of metaphor.

As foreigners, who ſettle in a nation as their home, come at laſt to be incorporated, and loſe the denomination of foreigners, ſo words and phraſes, at firſt borrowed and figurative, by long uſe become denizens in the language, and loſe the denomination of figures of ſpeech. When we ſpeak of the extent of knowledge, the ſteadineſs of virtue, the tenderneſs of affection, the perſpicuity of expreſſion, no man conceives theſe to be metaphorical expreſſions; they are as proper as any in the language: Yet it appears upon the very face of them, that they muſt have been metaphorical in thoſe who uſed them firſt; and that it is by uſe and preſcription that they have loſt the denomination of figurative, and acquired a right to be conſidered as proper words. This obſervation will be found to extend to a great part, perhaps the greateſt part, of the words of the moſt perfect languages: Sometimes the name of an individual is given to a general conception, and thereby the individual in a manner generaliſed. As when the Jew Shylock, in SHAKESPEARE, ſays, A Daniel come to judgment; yea, a Daniel! In this ſpeech, a Daniel is an attribute, or an univerſal. The character of Daniel,

as

as a man of ſingular wiſdom, is abſtracted from his perſon, and conſidered as capable of being attributed to other perſons.

Upon the whole, theſe two operations of abſtracting and generaliſing appear common to all men that have underſtanding. The practice of them is, and muſt be, familiar to every man that uſes language; but it is one thing to practiſe them, and another to explain how they are performed; as it is one thing to ſee, another to explain how we ſee. The firſt is the province of all men, and is the natural and eaſy operation of the faculties which God hath given us. The ſecond is the province of Philoſophers, and though a matter of no great difficulty in itſelf, has been much perplexed by the ambiguity of words, and ſtill more by the hypotheſes of Philoſophers.

Thus when I conſider a billiard ball, its colour is one attribute, which I ſignify by calling it white; its figure is another, which is ſignified by calling it ſpherical; the firm coheſion of its parts is ſignified by calling it hard; its recoiling, when it ſtrikes a hard body, is ſignified by its being called elaſtic; its origin, as being part of the tooth of an elephant, is ſignified by calling it ivory; and its uſe by calling it a billiard ball.

The words, by which each of thoſe attributes is ſignified, have one diſtinct meaning, and in this meaning are applicable to many individuals. They ſignify not any individual thing, but attributes common to many individuals; nor is it beyond the capacity of a child to underſtand them perfectly, and to apply them properly to every individual in which they are found.

As it is by analyſing a complex object into its ſeveral attributes that we acquire our ſimpleſt abſtract conceptions, it may be proper to compare this analyſis with that which a Chemiſt makes of a compounded body into the ingredients which enter into its compoſition; for although there be ſuch an analogy between theſe

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two operations, that we give to both the name of analyſis or reſolution, there is at the ſame time ſo great a diſſimilitude in ſome reſpects, that we may be led into error, by applying to one what belongs to the other.

It is obvious, that the chemical analyſis is an operation of the hand upon matter, by various material inſtruments. The analyſis we are now explaining is purely an operation of the underſtanding, which requires no material inſtrument, nor produces any change upon any external thing; we ſhall therefore call it the intellectual or mental analyſis.

In the chemical analyſis, the compound body itſelf is the ſubject analyſed. A ſubject ſo imperfectly known, that it may be compounded of various ingredients, when to our ſenſes it appears perfectly ſimple; and even when we are able to analyſe it into the different ingredients of which it is compoſed, we know not how or why the combination of thoſe ingredients produces ſuch a body.

Thus pure ſea-ſalt is a body, to appearance, as ſimple as any in nature. Every the leaſt particle of it, diſcernible by our ſenſes, is perfectly ſimilar to every other particle in all its qualities. The niceſt taſte, the quickeſt eye, can diſcern no mark of its being made up of different ingredients; yet, by the chemical art, it can be analyſed into an acid and an alkali, and can be again produced by the combination of thoſe two ingredients. But how this combination produces ſea-ſalt, no man has been able to diſcover. The ingredients are both as unlike the compound as any bodies we know. No man could have gueſſed before the thing was known that ſea-ſalt is compounded of thoſe two ingredients; no man could have gueſſed, that the union of thoſe two ingredients ſhould produce ſuch a compound as ſea-ſalt. Such in many caſes are the phænomena of the chemical analyſis of a compound body.

If we conſider the intellectual analyſis of an object, it is evident that

that nothing of this kind can happen; becauſe the thing analyſed is not an external object imperfectly known; it is a conception of the mind itſelf. And to ſuppoſe that there can be any thing in a conception that is not conceived, is a contradiction.

The reaſon of obſerving this difference between thoſe two kinds of analyſis is, that ſome Philoſophers, in order to ſupport their ſyſtems, have maintained, that a complex idea may have the appearrance of the moſt perfect ſimplicity, and retain no ſimilitude of any of the ſimple ideas of which it is compounded; juſt as a white colour may appear perfectly ſimple, and retain no ſimilitude to any of the ſeven primary colours of which it is compounded; or as a chemical compoſition may appear perfectly ſimple, and retain no ſimilitude to any of the ingredients.

From which thoſe Philoſophers have drawn this important concluſion, that a cluſter of the ideas of ſenſe, properly combined, may make the idea of a mind; and that all the ideas, which Mr LOCKE calls ideas of reflection, are only compoſitions of the ideas which we have by our five ſenſes. From this the tranſition is eaſy, that if a proper compoſition of the ideas of matter may make the idea of a mind, then a proper compoſition of matter itſelf may make a mind, and that man is only a piece of matter curiouſly formed.

In this curious ſyſtem, the whole fabric reſts upon this foundation, that a complex idea, which is made up of various ſimple ideas, may appear to be perfectly ſimple, and to have no marks of compoſition, becauſe a compound body may appear to our ſenſes to be perfectly ſimple.

Upon this fundamental propoſition of this ſyſtem I beg leave to make two remarks.

1. Suppoſing it to be true, it affirms only what *may be*. We are indeed

CHAP. III. indeed in moſt caſes very imperfect judges of what may be. But this we know, that were we ever ſo certain that a thing may be, this is no good reaſon for believing that it really is. A *may be* is a mere hypotheſis, which may furniſh matter of inveſtigation, but is not entitled to the leaſt degree of belief. The tranſition from what may be to what really is, is familiar and eaſy to thoſe who have a predilection for a hypotheſis; but to a man who ſeeks truth without prejudice or prepoſſeſſion, it is a very wide and difficult ſtep, and he will never paſs from the one to the other, without evidence not only that the thing may be, but that it really is.

2. As far as I am able to judge, this, which it is ſaid may be, cannot be. That a complex idea ſhould be made up of ſimple ideas; ſo that to a ripe underſtanding reflecting upon that idea, there ſhould be no appearance of compoſition, nothing ſimilar to the ſimple ideas of which it is compounded, ſeems to me to involve a contradiction. The idea is a conception of the mind. If any thing more than this is meant by the idea, I know not what it is; and I wiſh both to know what it is, and to have proof of its exiſtence. Now that there ſhould be any thing in the conception of an object which is not conceived, appears to me as manifeſt a contradiction, as that there ſhould be an exiſtence which does not exiſt, or that a thing ſhould be conceived, and not conceived at the ſame time.

But, ſay theſe Philoſophers, a white colour is produced by the compoſition of the primary colours, and yet has no reſemblance to any of them. I grant it. But what can be inferred from this with regard to the compoſition of ideas? To bring this argument home to the point, they muſt ſay, that becauſe a white colour is compounded of the primary colours, therefore the idea of a white colour is compounded of the ideas of the primary colours. This reaſoning, if it was admitted, would lead to innumerable abſurdities. An opaque fluid may be compounded of two or more pellucid fluids. Hence we might infer with equal force, that the idea of

of an opaque fluid may be compounded of the idea of two or more pellucid fluids.

Nature's way of compounding bodies, and our way of compounding ideas, are ſo different in many reſpects, that we cannot reaſon from the one to the other, unleſs it can be found that ideas are combined by fermentations and elective attractions, and may be analyſed in a furnace by the force of fire and of menſtruums. Until this diſcovery be made, we muſt hold thoſe to be ſimple ideas, which, upon the moſt attentive reflection, have no appearance of compoſition; and thoſe only to be the ingredients of complex ideas, which, by attentive reflection, can be perceived to be contained in them.

If the idea of mind, and its operations, may be compounded of the ideas of matter and its qualities, why may not the idea of matter be compounded of the ideas of mind? There is the ſame evidence for the laſt *may be* as for the firſt. And why may not the idea of ſound be compounded of the ideas of colour; or the idea of colour of thoſe of ſound? Why may not the idea of wiſdom be compounded of ideas of folly; or the idea of truth of ideas of abſurdity? But we leave theſe myſterious *may bes* to them that have faith to receive them.

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Of general Conceptions formed by Combination.

AS, by an intellectual analyſis of objects, we form general conceptions of ſingle attributes, (which of all conceptions that enter into the human mind are the moſt ſimple), ſo, by combining ſeveral of theſe into one parcel, and giving a name to that combination, we form general conceptions that may be very complex, and at the ſame time very diſtinct.

Thus

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Thus one, who, by analyſing extended objects, has got the ſimple notions of a point, a line, ſtraight or curve, an angle, a ſurface, a ſolid, can eaſily conceive a plain ſurface, terminated by four equal ſtraight lines meeting in four points at right angles. To this ſpecies of figure he gives the name of a ſquare. In like manner, he can conceive a ſolid terminated by ſix equal ſquares, and give it the name of a cube. A ſquare, a cube, and every name of mathematical figure, is a general term, expreſſing a complex general conception, made by a certain combination of the ſimple elements into which we analyſe extended bodies.

Every mathematical figure is accurately defined, by enumerating the ſimple elements of which it is formed, and the manner of their combination. The definition contains the whole eſſence of it: And every property that belongs to it may be deduced by demonſtrative reaſoning from its definition. It is not a thing that exiſts, for then it would be an individual; but it is a thing that is conceived without regard to exiſtence.

A farm, a manor, a pariſh, a county, a kingdom, are complex general conceptions, formed by various combinations and modifications of inhabited territory, under certain forms of government.

Different combinations of military men form the notions of a company, a regiment, an army.

The ſeveral crimes which are the objects of criminal law, ſuch as theft, murder, robbery, piracy, what are they but certain combinations of human actions and intentions, which are accurately defined in criminal law, and which it is found convenient to comprehend under one name, and conſider as one thing?

When we obſerve, that Nature, in her animal, vegetable, and inanimate productions, has formed many individuals that agree in many of their qualities and attributes, we are led by natural inſtinct

inſtinct to expect their agreement in other qualities, which we have not had occaſion to perceive. Thus, a child who has once burnt his finger, by putting it in the flame of one candle, expects the ſame event if he puts it in the flame of another candle, or in any flame, and is thereby led to think that the quality of burning belongs to all flame. This inſtinctive induction is not juſtified by the rules of logic, and it ſometimes leads men into harmleſs miſtakes, which experience may afterwards correct; but it preſerves us from deſtruction in innumerable dangers to which we are expoſed.

The reaſon of taking notice of this principle in human nature in this place is, that the diſtribution of the productions of Nature into *genera* and *ſpecies* becomes, on account of this principle, more generally uſeful.

The Phyſician expects, that the rhubarb which has never yet been tried will have like medical virtues with that which he has preſcribed on former occaſions. Two parcels of rhubarb agree in certain ſenſible qualities, from which agreement they are both called by the ſame general name *rhubarb*. Therefore it is expected that they will agree in their medical virtues. And as experience has diſcovered certain virtues in one parcel, or in many parcels, we preſume, without experience, that the ſame virtues belong to all parcels of rhubarb that ſhall be uſed.

If a traveller meets a horſe, an ox, or a ſheep, which he never ſaw before, he is under no apprehenſion, believing theſe animals to be of a ſpecies that is tame and inoffenſive. But he dreads a lion or a tyger, becauſe they are of a fierce and ravenous ſpecies.

We are capable of receiving innumerable advantages, and are expoſed to innumerable dangers, from the various productions of Nature, animal, vegetable, and inanimate. The life of man, if an hundred times longer than it is, would be inſufficient to learn

CHAP. IV. from experience the uſeful and hurtful qualities of every individual production of Nature taken ſingly.

The Author of Nature hath made proviſion for our attaining that knowledge of his works which is neceſſary for our ſubſiſtence and preſervation, partly by the conſtitution of the productions of Nature, and partly by the conſtitution of the human mind.

For *firſt*, In the productions of Nature, great numbers of individuals are made ſo like to one another, both in their obvious and in their more occult qualities, that we are not only enabled, but invited, as it were, to reduce them into claſſes, and to give a general name to a claſs; a name which is common to every individual of the claſs, becauſe it comprehends in its ſignification thoſe qualities or attributes only that are common to all the individuals of that claſs.

Secondly, The human mind is ſo framed, that, from the agreement of individuals in the more obvious qualities by which we reduce them into one claſs, we are naturally led to expect that they will be found to agree in their more latent qualities, and in this we are ſeldom diſappointed.

We have, therefore, a ſtrong and rational inducement, both to diſtribute natural ſubſtances into claſſes, *genera* and *ſpecies*, under general names; and to do this with all the accuracy and diſtinctneſs we are able. For the more accurate our diviſions are made, and the more diſtinctly the ſeveral ſpecies are defined, the more ſecurely we may rely, that the qualities we find in one or in a few individuals will be found in all of the ſame ſpecies.

Every ſpecies of natural ſubſtances which has a name in language, is an attribute of many individuals, and is itſelf a combination of more ſimple attributes, which we obſerve to be common to thoſe individuals.

We

We ſhall find a great part of the words of every language, nay, I apprehend, the far greater part, to ſignify combinations of more ſimple general conceptions, which men have found proper to be bound up, as it were, in one parcel, by being deſigned by one name.

Some general conceptions there are, which may more properly be called *compoſitions* or *works* than mere combinations. Thus, one may conceive a machine which never exiſted. He may conceive an air in muſic, a poem, a plan of architecture, a plan of government, a plan of conduct in public or in private life, a ſentence, a diſcourſe, a treatiſe. Such compoſitions are things conceived in the mind of the author, not individuals that really exiſt; and the ſame general conception which the author had may be communicated to others by language.

Thus, the Oceana of HARRINGTON was conceived in the mind of its author. The materials of which it is compoſed are things conceived, not things that exiſted. His ſenate, his popular aſſembly, his magiſtrates, his elections, are all conceptions of his mind, and the whole is one complex conception. And the ſame may be ſaid of every work of the human underſtanding.

Very different from theſe are the works of God, which we behold. They are works of creative power, not of underſtanding only. They have a real exiſtence. Our beſt conceptions of them are partial and imperfect. But of the works of the human underſtanding our conception may be perfect and complete. They are nothing but what the author conceived, and what he can expreſs by language, ſo as to convey his conception perfectly to men like himſelf.

Although ſuch works are indeed complex general conceptions, they do not ſo properly belong to our preſent ſubject. They are more the objects of judgment and of taſte, than of bare conception or ſimple apprehenſion.

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To return therefore to thoſe complex conceptions which are formed merely by combining thoſe that are more ſimple. Nature has given us the power of combining ſuch ſimple attributes, and ſuch a number of them as we find proper; and of giving one name to that combination, and conſidering it as one object of thought.

The ſimple attributes of things, which fall under our obſervation, are not ſo numerous but that they may all have names in a copious language. But to give names to all the combinations that can be made of two, three, or more of them, would be impoſſible. The moſt copious languages have names but for a very ſmall part.

It may likewiſe be obſerved, that the combinations that have names are nearly, though not perfectly, the ſame in the different languages of civilized nations, that have intercourſe with one another. Hence it is, that the Lexicographer, for the moſt part, can give words in one language anſwering perfectly, or very nearly, to thoſe of another; and what is wrote in a ſimple ſtyle in one language, can be tranſlated almoſt word for word into another.

From theſe obſervations we may conclude, that there are either certain common principles of human nature, or certain common occurrences of human life, which diſpoſe men, out of an infinite number that might be formed, to form certain combinations rather than others.

Mr HUME, in order to account for this phænomenon, has recourſe to what he calls the aſſociating qualities of ideas; to wit, cauſation, contiguity in time, and place, and ſimilitude. He conceives, "that one of the moſt remarkable effects of thoſe aſſociating qualities, is the complex ideas which are the common ſubjects of our thoughts. That this alſo is the cauſe why languages "ſo nearly correſpond to one another. Nature in a manner pointing out to every one thoſe ideas which are moſt proper to be "united into a complex one."

I agree with this ingenious author, that Nature in a manner points out thoſe ſimple ideas which are moſt proper to be united into a complex one: But Nature does this, not ſolely or chiefly by the relations between the ſimple ideas, of contiguity, cauſation, and reſemblance; but rather by the fitneſs of the combinations we make, to aid our own conceptions, and to convey them to others by language eaſily and agreeably.

The end and uſe of language, without regard to the aſſociating qualities of ideas, will lead men that have common underſtanding to form ſuch complex notions as are proper for expreſſing their wants, their thoughts, and their deſires: And in every language we ſhall find theſe to be the complex notions that have names.

In the rudeſt ſtate of ſociety, men muſt have occaſion to form the general notions of man, woman, father, mother, ſon, daughter, ſiſter, brother, neighbour, friend, enemy, and many others, to expreſs the common relations of one perſon to another.

If they are employed in hunting, they muſt have general terms to expreſs the various implements and operations of the chace. Their houſes and clothing, however ſimple, will furniſh another ſet of general terms, to expreſs the materials, the workmanſhip, and the excellencies and defects of thoſe fabrics. If they ſail upon rivers, or upon the ſea, this will give occaſion to a great number of general terms, which otherwiſe would never have occurred to their thoughts.

The ſame thing may be ſaid of agriculture, of paſturage, of every art they practiſe, and of every branch of knowledge they attain. The neceſſity of general terms for communicating our ſentiments is obvious; and the invention of them, as far as we find them neceſſary, requires no other talent but that degree of underſtanding which is common to men.

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The notions of debtor and creditor, of profit and loſs, of account, balance, ſtock on hand, and many others, are owing to commerce. The notions of latitude, longitude, courſe, diſtance run; and thoſe of ſhips, and of their various parts, furniture and operations, are owing to navigation. The Anatomiſt muſt have names, for the various ſimilar and diſſimilar parts of the human body, and words, to expreſs their figure, poſition, ſtructure, and uſe. The Phyſician muſt have names for the various diſeaſes of the body, their cauſes, ſymptoms, and means of cure.

The like may be ſaid of the Grammarian, the Logician, the Critic, the Rhetorician, the Moraliſt, the Naturaliſt, the Mechanic, and every man that profeſſes any art or ſcience.

When any diſcovery is made in art or in nature, which requires new combinations and new words to expreſs it properly, the invention of theſe is eaſy to thoſe who have a diſtinct notion of the thing to be expreſſed; and ſuch words will readily be adopted, and receive the public ſanction.

If, on the other hand, any man of eminence, through vanity or want of judgment, ſhould invent new words, to expreſs combinations that have neither beauty nor utility, or which may as well be expreſſed in the current language, his authority may give them currency for a time with ſervile imitators, or blind admirers: But the judicious will laugh at them, and they will ſoon loſe their credit. So true was the obſervation made by POMPONIUS MARCELLUS, an ancient Grammarian, to TIBERIUS CÆSAR. "You, "CÆSAR, have power to make a man a denizen of Rome, but "not to make a word a denizen of the Roman language."

Among nations that are civilized, and have intercourſe with one another, the moſt neceſſary and uſeful arts will be common; the important parts of human knowledge will be common; their ſeveral languages will be fitted to it, and conſequently to one another.

New

New inventions of general uſe give an eaſy birth to new complex notions and new names, which ſpread as far as the invention does. How many new complex notions have been formed, and names for them invented in the languages of Europe, by the modern inventions of printing, of gunpowder, of the mariner's compaſs, of optical glaſſes? The ſimple ideas combined in thoſe complex notions, and the aſſociating qualities of thoſe ideas, are very ancient; but they never produced thoſe complex notions until there was uſe for them.

What is peculiar to a nation in its cuſtoms, manners, or laws, will give occaſion to complex notions and words peculiar to the language of that nation. Hence it is eaſy to ſee, why an impeachment, and an attainder, in the Engliſh language, and oſtraciſm in the Greek language, have not names anſwering to them in other languages.

I apprehend, therefore, that it is utility, and not the aſſociating qualities of the ideas, that has led men to form only certain combinations, and to give names to them in language, while they neglect an infinite number that might be formed.

The common occurrences of life, in the intercourſe of men, and in their occupations, give occaſion to many complex notions. We ſee an individual occurrence, which draws our attention more or leſs, and may be a ſubject of converſation. Other occurrences, ſimilar to this in many reſpects, have been obſerved, or may be expected. It is convenient that we ſhould be able to ſpeak of what is common to them all, leaving out the unimportant circumſtances of time, place, and perſons. This we can do with great eaſe, by giving a name to what is common to all thoſe individual occurrences. Such a name is a great aid to language, becauſe it comprehends, in one word, a great number of ſimple notions, which it would be very tedious to expreſs in detail.

Thus

CHAP. IV. Thus men have formed the complex notions of eating, drinking, ſleeping, walking, riding, running, buying, ſelling, plowing, ſowing, a dance, a feaſt, war, a battle, victory, triumph; and others without number.

Such things muſt frequently be the ſubject of converſation; and if we had not a more compendious way of expreſſing them than by a detail of all the ſimple notions they comprehend, we ſhould loſe the benefit of ſpeech.

The different talents, diſpoſitions, and habits of men in ſociety, being intereſting to thoſe who have to do with them, will in every language have general names; ſuch as wiſe, fooliſh, knowing, ignorant, plain, cunning. In every operative art, the tools, inſtruments, materials, the work produced, and the various excellencies and defects of theſe, muſt have general names.

The various relations of perſons, and of things which cannot eſcape the obſervation of men in ſociety, lead us to many complex general notions; ſuch as father, brother, friend, enemy, maſter, ſervant, property, theft, rebellion.

The terms of art in the ſciences make another claſs of general names of complex notions; as in mathematics, axiom, definition, problem, theorem, demonſtration.

I do not attempt a complete enumeration even of the claſſes of complex general conceptions. Thoſe I have named as a ſpecimen, I think, are moſtly comprehended under what Mr LOCKE calls mixed modes and relations; which, he juſtly obſerves, have names given them in language, in preference to innumerable others that might be formed; for this reaſon only, that they are uſeful for the purpoſe of communicating our thoughts by language.

In all the languages of mankind, not only the writings and diſcourſes

courſes of the learned, but the converſation of the vulgar, is al- CHAP. IV.
moſt entirely made up of general words, which are the ſigns of general conceptions, either ſimple or complex. And in every language, we find the terms ſignifying complex notions to be ſuch, and only ſuch, as the uſe of language requires.

There remains a very large claſs of complex general terms, on which I ſhall make ſome obſervations; I mean thoſe by which we name the ſpecies, genera, and tribes of natural ſubſtances.

It is utility, indeed, that leads us to give general names to the various ſpecies of natural ſubſtances; but, in combining the attributes which are included under the ſpecific name, we are more aided and directed by Nature, than in forming other combinations of mixed modes and relations. In the laſt, the ingredients are brought together in the occurrences of life, or in the actions or thoughts of men. But, in the firſt, the ingredients are united by nature in many individual ſubſtances which God has made. We form a general notion of thoſe attributes, wherein many individuals agree. We give a ſpecific name to this combination; which name is common to all ſubſtances having thoſe attributes, which either do or may exiſt. The ſpecific name comprehends neither more nor fewer attributes than we find proper to put into its definition. It comprehends not time, nor place, nor even exiſtence, although there can be no individual without theſe.

This work of the underſtanding is abſolutely neceſſary for ſpeaking intelligibly of the productions of Nature, and for reaping the benefits we receive, and avoiding the dangers we are expoſed to from them. The individuals are ſo many, that to give a proper name to each would be beyond the power of language. If a good or bad quality was obſerved in an individual, of how ſmall uſe would this be, if there was not a ſpecies in which the ſame quality might be expected?

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Without ſome general knowledge of the qualities of natural ſubſtances, human life could not be preſerved. And there can be no general knowledge of this kind, without reducing them to ſpecies under ſpecific names. For this reaſon, among the rudeſt nations, we find names for fire, water, earth, air, mountains, fountains, rivers; for the kinds of vegetables they uſe; of animals they hunt or tame, or that are found uſeful or hurtful.

Each of thoſe names ſignifies in general a ſubſtance having a certain combination of attributes. The name therefore muſt be common to all ſubſtances in which thoſe attributes are found.

Such general names of ſubſtances being found in all vulgar languages, before Philoſophers began to make accurate diviſions, and leſs obvious diſtinctions, it is not to be expected that their meaning ſhould be more preciſe than is neceſſary for the common purpoſes of life.

As the knowledge of Nature advances, more ſpecies of natural ſubſtances are obſerved, and their uſeful qualities diſcovered. In order that this important part of human knowledge may be communicated, and handed down to future generations, it is not ſufficient that the ſpecies have names. Such is the fluctuating ſtate of language, that a general name will not always retain the ſame preciſe ſignification, unleſs it have a definition in which men are diſpoſed to acquieſce.

There was undoubtedly a great fund of natural knowledge among the Greeks and Romans in the time of PLINY. There is a great fund in his natural hiſtory; but much of it is loſt to us, for this reaſon among others, that we know not what ſpecies of ſubſtance he means by ſuch a name.

Nothing could have prevented this loſs but an accurate definition of the name, by which the ſpecies might have been diſtinguiſhed from all others, as long as that name and its definition remained.

To

To prevent ſuch loſs in future times, modern Philoſophers have very laudably attempted to give names and accurate definitions of all the known ſpecies of ſubſtances, wherewith the bountiful Creator hath enriched our globe.

This is neceſſary, in order to form a copious and diſtinct language concerning them, and conſequently to facilitate our knowledge of them, and to convey it to future generations.

Every ſpecies that is known to exiſt ought to have a name; and that name ought to be defined by ſuch attributes as ſerve beſt to diſtinguiſh the ſpecies from all others.

Nature invites to this work, by having formed things ſo as to make it both eaſy and important.

For, *firſt*, We perceive numbers of individual ſubſtances ſo like in their obvious qualities, that the moſt unimproved tribes of men conſider them as of one ſpecies, and give them one common name.

Secondly, The more latent qualities of ſubſtances are generally the ſame in all the individuals of a ſpecies: So that what, by obſervation or experiment, is found in a few individuals of a ſpecies, is preſumed, and commonly found to belong to the whole. By this we are enabled, from particular facts, to draw general concluſions. This kind of induction is indeed the maſter-key to the knowledge of Nature, without which we could form no general concluſions in that branch of philoſophy.

And, *thirdly*, By the very conſtitution of our nature, we are led, without reaſoning, to aſcribe to the whole ſpecies what we have found to belong to the individuals. It is thus we come to know that fire burns, and water drowns; that bodies gravitate, and bread nouriſhes.

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The ſpecies of two of the kingdoms of Nature, to wit, the animal and the vegetable, ſeem to be fixed by Nature, by the power they have of producing their like. And in theſe, men in all ages and nations have accounted the parent and the progeny of the ſame ſpecies. The differences among Naturaliſts, with regard to the ſpecies of theſe two kingdoms, are very inconſiderable, and may be occaſioned by the changes produced by ſoil, climate, and culture, and ſometimes by monſtrous productions, which are comparatively rare.

In the inanimate kingdom we have not the ſame means of dividing things into ſpecies, and therefore the limits of ſpecies ſeem to be more arbitrary: But from the progreſs already made, there is ground to hope, that even in this kingdom, as the knowledge of it advances, the various ſpecies may be ſo well diſtinguiſhed and defined as to anſwer every valuable purpoſe.

When the ſpecies are ſo numerous as to burden the memory, it is greatly aſſiſted by diſtributing them into *genera*; the *genera* into tribes, the tribes into orders, and the orders into claſſes.

Such a regular diſtribution of natural ſubſtances, by diviſions and ſubdiviſions, has got the name of a ſyſtem.

It is not a ſyſtem of truths, but a ſyſtem of general terms, with their definitions; and it is not only a great help to memory, but facilitates very much the definition of the terms. For the definition of the genus is common to all the ſpecies of that genus, and ſo is underſtood in the definition of each ſpecies, without the trouble of repetition. In like manner, the definition of a tribe is underſtood in the definition of every genus, and every ſpecies of that tribe; and the ſame may be ſaid of every ſuperior diviſion.

The effect of ſuch a ſyſtematical diſtribution of the productions of Nature, is ſeen in our ſyſtems of zoology, botany, and mineralogy;

ralogy; in which a ſpecies is commonly defined accurately in a line or two, which, without the ſyſtematical arrangement, could hardly be defined in a page. CHAP. IV.

With regard to the utility of ſyſtems of this kind, men have gone into contrary extremes; ſome have treated them with contempt, as a mere dictionary of words; others, perhaps, reſt in ſuch ſyſtems, as all that is worth knowing in the works of Nature.

On the one hand, it is not the intention of ſuch ſyſtems to communicate all that is known of the natural productions which they deſcribe. The properties moſt fit for defining and diſtinguiſhing the ſeveral ſpecies, are not always thoſe that are moſt uſeful to be known. To diſcover and to communicate the uſes of natural ſubſtances in life, and in the arts, is no doubt that part of the buſineſs of a Naturaliſt which is the moſt important; and the ſyſtematical arrangement of them is chiefly to be valued for its ſubſerviency to this end. This every judicious Naturaliſt will grant.

But, on the other hand, the labour is not to be deſpiſed, by which the road to an uſeful and important branch of knowledge is made eaſy in all time to come; eſpecially when this labour requires both extenſive knowledge and great abilities.

The talent of arranging properly, and defining accurately, is ſo rare, and at the ſame time ſo uſeful, that it may very juſtly be conſidered as a proof of real genius, and as entitled to a high degree of praiſe. There is an intrinſic beauty in arrangement, which captivates the mind, and gives pleaſure, even abſtracting from its utility; as in moſt other things, ſo in this particularly, Nature has joined beauty with utility. The arrangement of an army in the day of battle is a grand ſpectacle. The ſame men crowded in a fair, have no ſuch effect. It is not more ſtrange therefore that ſome men ſpend their days in ſtudying ſyſtems of Nature, than that other men employ their lives in the ſtudy of languages. The moſt important

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important end of thoſe ſyſtems, ſurely is to form a copious and an unambiguous language concerning the productions of Nature, by which every uſeful diſcovery concerning them may be communicated to the preſent, and tranſmitted to all future generations, without danger of miſtake.

General terms, eſpecially ſuch as are complex in their ſignification, will never keep one preciſe meaning without accurate definition; and accurate definitions of ſuch terms can in no way be formed ſo eaſily and advantageouſly, as by reducing the things they ſignify into a regular ſyſtem.

Very eminent men in the medical profeſſion, in order to remove all ambiguity in the names of diſeaſes, and to advance the healing art, have of late attempted to reduce into a ſyſtematical order the diſeaſes of the human body, and to give diſtinct names, and accurate definitions, of the ſeveral ſpecies, *genera*, orders, and claſſes, into which they diſtribute them; and I apprehend, that in every art and ſcience, where the terms of the art have any ambiguity that obſtructs its progreſs, this method will be found the eaſieſt and moſt ſucceſsful for the remedy of that evil.

It were even to be wiſhed, that the general terms which we find in common language, as well as thoſe of the arts and ſciences, could be reduced to a ſyſtematical arrangement, and defined ſo as that they might be free from ambiguity; but perhaps the obſtacles to this are inſurmountable. I know no man who has attempted it but Biſhop WILKINS in his Eſſay towards a real character and a philoſophical language. The attempt was grand, and worthy of a man of genius.

The formation of ſuch ſyſtems, therefore, of the various productions of Nature, inſtead of being deſpiſed, ought to be ranked among the valuable improvements of modern ages, and to be the more eſteemed that its utility reaches to the moſt diſtant future times,

times, and, like the invention of writing, ſerves to embalm a moſt important branch of human knowledge, and to preſerve it from being corrupted or loſt.

CHAP. V.

Obſervations concerning the Names given to our general Notions.

HAVING now explained, as well as I am able, thoſe operations of the mind by which we analyſe the objects which Nature preſents to our obſervation, into their ſimple attributes, giving a general name to each, and by which we combine any number of ſuch attributes into one whole, and give a general name to that combination, I ſhall offer ſome obſervations relating to our general notions, whether ſimple or complex.

I apprehend that the names given to them by modern Philoſophers have contributed to darken our ſpeculations about them, and to render them difficult and abſtruſe.

We call them general notions, conceptions, ideas. The words notion and conception, in their proper and moſt common ſenſe, ſignify the act or operation of the mind in conceiving an object. In a figurative ſenſe, they are ſometimes put for the object conceived. And I think they are rarely, if ever, uſed in this figurative ſenſe, except when we ſpeak of what we call general notions or general conceptions. The word idea, as it is uſed in modern times, has the ſame ambiguity.

Now, it is only in the laſt of theſe ſenſes, and not in the firſt, that we can be ſaid to have general notions or conceptions. The generality is in the object conceived, and not in the act of the mind by which it is conceived. Every act of the mind is an individual act, which does or did exiſt. But we have power to conceive

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conceive things which neither do nor ever did exiſt. We have power to conceive attributes without regard to their exiſtence. The conception of ſuch an attribute is a real and individual act of the mind; but the attribute conceived is common to many individuals that do or may exiſt. We are too apt to confound an object of conception with the conception of that object. But the danger of doing this muſt be much greater when the object of conception is called a conception.

The Peripatetics gave to ſuch objects of conception the names of univerſals, and of predicables. Thoſe names had no ambiguity, and I think were much more fit to expreſs what was meant by them than the names we uſe.

It is for this reaſon that I have ſo often uſed the word attribute, which has the ſame meaning with predicable. And for the ſame reaſon, I have thought it neceſſary repeatedly to warn the reader, that when, in compliance with cuſtom, I ſpeak of general notions or general conceptions, I always mean things conceived, and not the act of the mind in conceiving them.

The Pythagoreans and Platoniſts gave the name of *ideas* to ſuch general objects of conception, and to nothing elſe. As we borrowed the word idea from them, ſo that it is now familiar in all the languages of Europe, I think it would have been happy if we had alſo borrowed their meaning, and had uſed it only to ſignify what they meant by it. I apprehend we want an unambiguous word to diſtinguiſh things barely conceived from things that exiſt. If the word idea was uſed for this purpoſe only, it would be reſtored to its original meaning, and ſupply that want.

We may ſurely agree with the Platoniſts in the meaning of the word *idea*, without adopting their theory concerning ideas. We need not believe, with them, that ideas are eternal and ſelf-exiſtent, and that they have a more real exiſtence than the things we ſee and feel.

They

They were led to give exiſtence to ideas, from the common prejudice that every thing which is an object of conception muſt really exiſt; and having once given exiſtence to ideas, the reſt of their myſterious ſyſtem about ideas followed of courſe; for things merely conceived, have neither beginning nor end, time nor place; they are ſubject to no change; they are the patterns and exemplars according to which the Deity made every thing that he made; for the work muſt be conceived by the artificer before it is made.

Theſe are undeniable attributes of the ideas of PLATO, and if we add to them that of real exiſtence, we have the whole myſterious ſyſtem of Platonic ideas. Take away the attribute of exiſtence, and ſuppoſe them not to be things that exiſt, but things that are barely conceived, and all the myſtery is removed; all that remains is level to the human underſtanding.

The word *eſſence* came to be much uſed among the ſchoolmen, and what the Platoniſts called the idea of a ſpecies, they called its eſſence. The word *eſſentia* is ſaid to have been made by CICERO; but even his authority could not give it currency, until long after his time. It came at laſt to be uſed, and the ſchoolmen fell into much the ſame opinions concerning eſſences, as the Platoniſts held concerning ideas. The eſſences of things were held to be uncreated, eternal, and immutable.

Mr LOCKE diſtinguiſhes two kinds of eſſence, the real and the nominal. By the real eſſence he means the conſtitution of an individual, which makes it to be what it is. This eſſence muſt begin and end with the individual to which it belongs. It is not therefore a Platonic idea. But what Mr LOCKE calls the nominal eſſence, is the conſtitution of a ſpecies, or that which makes an individual to be of ſuch a ſpecies; and this is nothing but that combination of attributes which is ſignified by the name of the ſpecies, and which we conceive without regard to exiſtence.

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The eſſence of a ſpecies therefore, is what the Platoniſts called the idea of the ſpecies.

If the word *idea* be reſtricted to the meaning which it bore among the Platoniſts and Pythagoreans, many things which Mr LOCKE has ſaid with regard to ideas will be juſt and true, and others will not.

It will be true, that moſt words, (indeed all general words,) are the ſigns of ideas; but proper names are not; they ſignify individual things, and not ideas. It will be true not only that there are general and abſtract ideas, but that all ideas are general and abſtract. It will be ſo far from the truth, that all our ſimple ideas are got immediately, either from ſenſation, or from conſciouſneſs; that no ſimple idea is got by either, without the co-operation of other powers. The objects of ſenſe, of memory, and of conſciouſneſs, are not ideas but individuals; they muſt be analyſed by the underſtanding into their ſimple ingredients, before we can have ſimple ideas; and thoſe ſimple ideas muſt be again combined by the underſtanding, in diſtinct parcels with names annexed, in order to give us complex ideas: It will be probable not only that brutes have no abſtract ideas, but that they have no ideas at all.

I ſhall only add, that the learned author of the origin and progreſs of language, and perhaps his learned friend Mr HARRIS, are the only modern authors I have met with, who reſtrict the word *idea* to this meaning. Their acquaintance with ancient philoſophy led them to this. What pity is it that a word, which in ancient philoſophy had a diſtinct meaning, and which, if kept to that meaning, would have been a real acquiſition to our language, ſhould be uſed by the moderns in ſo vague and ambiguous a manner, that it is more apt to perplex and darken our ſpeculations, than to convey uſeful knowledge.

From all that has been ſaid about abſtract and general conceptions, I think we may draw the following concluſions concerning them.

Firſt,

Firſt, That it is by abſtraction that the mind is furniſhed with all its moſt ſimple, and moſt diſtinct notions: The ſimpleſt objects of ſenſe appear both complex and indiſtinct, until by abſtraction they are analyſed into their more ſimple elements; and the ſame may be ſaid of the objects of memory and of conſciouſneſs.

Secondly, Our moſt diſtinct complex notions are thoſe that are formed by compounding the ſimple notions got by abſtraction.

Thirdly, Without the powers of abſtracting and generaliſing, it would be impoſſible to reduce things into any order and method, by dividing them into genera and ſpecies.

Fourthly, Without thoſe powers there could be no definition; for definition can only be applied to univerſals, and no individual can be defined.

Fifthly, Without abſtract and general notions there can neither be reaſoning nor language.

Sixthly, As brute animals ſhew no ſigns of being able to diſtinguiſh the various attributes of the ſame ſubject; of being able to claſs things into genera and ſpecies; to define, to reaſon, or to communicate their thoughts by artificial ſigns, as men do; I muſt think with Mr LOCKE, that they have not the powers of abſtracting and generaliſing; and that in this particular, Nature has made a ſpecific difference between them and the human ſpecies.

CHAP. VI.

Opinions of Philoſophers about Univerſals.

IN the ancient philoſophy, the doctrine of univerſals, that is, of things which we expreſs by general terms, makes a great figure. The ideas of the Pythagoreans and Platoniſts, of which ſo much

CHAP. VI. has been already ſaid, were univerſals. All ſcience is employed about univerſals as its object. It was thought that there can be no ſcience, unleſs its object be ſomething real and immutable; and therefore thoſe who paid homage to truth and ſcience, maintained that ideas or univerſals have a real and immutable exiſtence.

The Sceptics, on the contrary, (for there were ſceptical Philoſophers in thoſe early days) maintained, that all things are mutable, and in a perpetual fluctuation; and from this principle inferred, that there is no ſcience, no truth; that all is uncertain opinion.

PLATO, and his maſters of the Pythagorean ſchool, yielded this with regard to objects of ſenſe, and acknowledged that there could be no ſcience or certain knowledge concerning them: But they held, that there are objects of intellect of a ſuperior order and nature, which are permanent and immutable. Theſe are ideas, or univerſal natures, of which the objects of ſenſe are only the images and ſhadows.

To theſe ideas they aſcribed, as I have already obſerved, the moſt magnificent attributes. Of man, of a roſe, of a circle, and of every ſpecies of things, they believed that there is one idea or form, which exiſted from eternity, before any individual of the ſpecies was formed: That this idea is the exemplar or pattern, according to which the Deity formed the individuals of the ſpecies: That every individual of the ſpecies participates of this idea, which conſtitutes its eſſence; and that this idea is likewiſe an object of the human intellect, when, by due abſtraction, we diſcern it to be one in all the individuals of the ſpecies.

Thus the idea of every ſpecies, though one and immutable, might be conſidered in three different views or reſpects; *firſt*, as having an eternal exiſtence before there was any individual of the ſpecies; *ſecondly*, as exiſting in every individual of that ſpecies, without diviſion or multiplication, and making the eſſence of the ſpecies;

ſpecies; and, *thirdly*, as an object of intellect and of ſcience in man. CHAP. VI.

Such I take to be the doctrine of PLATO, as far as I am able to comprehend it. His diſciple ARISTOTLE rejected the firſt of theſe views of ideas as viſionary, but differed little from his maſter with regard to the two laſt. He did not admit the exiſtence of univerſal natures antecedent to the exiſtence of individuals; but he held, that every individual conſiſts of matter and form: That the form (which I take to be what PLATO calls the idea) is common to all the individuals of the ſpecies, and that the human intellect is fitted to receive the forms of things as objects of contemplation. Such profound ſpeculations about the nature of univerſals, we find even in the firſt ages of philoſophy. I wiſh I could make them more intelligible to myſelf and to the reader.

The diviſion of univerſals into five claſſes; to wit, genus, ſpecies, ſpecific difference, properties, and accidents, is likewiſe very ancient, and I conceive was borrowed by the Peripatetics from the Pythagorean ſchool.

PORPHYRY has given us a very diſtinct treatiſe upon theſe, as an introduction to ARISTOTLE's categories. But he has omitted the intricate metaphyſical queſtions that were agitated about their nature; ſuch as, Whether genera and ſpecies do really exiſt in nature? Or, Whether they are only conceptions of the human mind? If they exiſt in nature, Whether they are corporeal or incorporeal? And whether they are inherent in the objects of ſenſe, or disjoined from them? Theſe queſtions he tells us, for brevity's ſake, he omits, becauſe they are very profound, and require accurate diſcuſſion. It is probable, that theſe queſtions exerciſed the wits of the Philoſophers till about the twelfth century.

About that time, ROSCELINUS or RUSCELINUS, the maſter of the famous ABELARD, introduced a new doctrine, that there is nothing

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thing univerſal but words or names. For this, and other hereſies, he was much perſecuted. However, by his eloquence and abilities, and thoſe of his diſciple ABELARD, the doctrine ſpread, and thoſe who followed it were called Nominaliſts. His antagoniſts, who held that there are things that are really univerſal, were called Realiſts. The ſcholaſtic Philoſophers, from the beginning of the twelfth century, were divided into theſe two ſects. Some few took a middle road between the contending parties. That univerſality, which the Realiſts held to be in things themſelves, Nominaliſts in names only, They held to be neither in things nor in names only, but in our conceptions. On this account they were called Conceptualiſts: But being expoſed to the batteries of both the oppoſite parties, they made no great figure.

When the ſect of Nominaliſts was like to expire, it received new life and ſpirit from OCCAM, the diſciple of SCOTUS, in the fourteenth century. Then the diſpute about univerſals, *a parte rei*, was revived with the greateſt animoſity in the ſchools of Britain, France, and Germany, and carried on, not by arguments only, but by bitter reproaches, blows, and bloody affrays, until the doctrines of LUTHER and the other Reformers turned the attention of the learned world to more important ſubjects.

After the revival of learning, Mr HOBBES adopted the opinion of the Nominaliſts. *Human nature*, chap. 5. ſect. 6. " It is plain, " therefore, ſays he, that there is nothing univerſal but names." And in his *Leviathan*, part 1. chap. 4. " There being nothing uni- " verſal but names, proper names bring to mind one thing only; " univerſals recal any one of many."

Mr LOCKE, according to the diviſion before mentioned, I think, may be accounted a Conceptualiſt. He does not maintain that there are things that are univerſal; but that we have general or univerſal ideas which we form by abſtraction; and this power of forming abſtract and general ideas, he conceives to be that which makes

makes the chief diſtinction in point of underſtanding between men and brutes. CHAP. VI.

Mr LOCKE's doctrine about abſtraction has been combated by two very powerful antagoniſts, Biſhop BERKELEY and Mr HUME, who have taken up the opinion of the Nominaliſts. The former thinks, " That the opinion, that the mind hath a power of form-
" ing abſtract ideas, or notions of things, has had a chief part in
" rendering ſpeculation intricate and perplexed, and has occaſioned
" innumerable errors and difficulties in almoſt all parts of know-
" ledge." That " abſtract ideas are like a fine and ſubtile net,
" which has miſerably perplexed and entangled the minds of men,
" with this peculiar circumſtance, that by how much the finer
" and more curious was the wit of any man, by ſo much the
" deeper was he like to be enſnared, and faſter held therein." That
" among all the falſe principles that have obtained in the world,
" there is none hath a more wide influence over the thoughts of
" ſpeculative men than this of abſtract general ideas."

The good Biſhop therefore, in twenty-four pages of the Introduction to his Principles of Human Knowledge, encounters this principle with a zeal proportioned to his apprehenſion of its malignant and extenſive influence.

That the zeal of the ſceptical Philoſopher againſt abſtract ideas was almoſt equal to that of the Biſhop, appears from his words, Treatiſe of Human Nature, book 1. part 1. ſect. 7. " A very ma-
" terial queſtion has been ſtarted concerning abſtract or general
" ideas, whether they be general or particular in the mind's con-
" ception of them? A great Philoſopher (he means Dr BERKELEY)
" has diſputed the received opinion in this particular, and has aſ-
" ſerted, that all general ideas are nothing but particular ones an-
" nexed to a certain term, which gives them a more extenſive ſig-
" nification, and makes them recal upon occaſion other individuals
" which are ſimilar to them. As I look upon this to be one of the
" greateſt

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" greateſt and moſt valuable diſcoveries that have been made of " late years in the republic of letters, I ſhall here endeavour to " confirm it by ſome arguments, which I hope will put it beyond " all doubt and controverſy."

I ſhall make an end of this ſubject, with ſome reflections on what has been ſaid upon it by theſe two eminent Philoſophers.

1. *Firſt*, I apprehend that we cannot, with propriety, be ſaid to have abſtract and general ideas, either in the popular or in the philoſophical ſenſe of that word. In the popular ſenſe an idea is a thought; it is the act of the mind in thinking, or in conceiving any object. This act of the mind is always an individual act, and therefore there can be no general idea in this ſenſe. In the philoſophical ſenſe, an idea is an image in the mind, or in the brain, which in Mr LOCKE's ſyſtem is the immediate object of thought; in the ſyſtem of BERKELEY and HUME the only object of thought. I believe there are no ideas of this kind, and therefore no abſtract general ideas. Indeed, if there were really ſuch images in the mind, or in the brain, they could not be general, becauſe every thing that really exiſts is an individual. Univerſals are neither acts of the mind, nor images in the mind.

As therefore there are no general ideas in either of the ſenſes in which the word idea is uſed by the moderns, BERKELEY and HUME have in this queſtion an advantage over Mr LOCKE; and their arguments againſt him are good *ad hominem*. They ſaw farther than he did into the juſt conſequences of the hypotheſis concerning ideas, which was common to them and to him; and they reaſoned juſtly from this hypotheſis, when they concluded from it, that there is neither a material world, nor any ſuch power in the human mind as that of abſtraction.

A triangle, in general, or any other univerſal, might be called an idea by a Platoniſt; but, in the ſtyle of modern philoſophy, it

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is not an idea, nor do we ever aſcribe to ideas the properties of triangles. It is never ſaid of any idea, that it has three ſides and three angles. We do not ſpeak of equilateral, iſoſceles, or ſcalene ideas, nor of right angled, acute angled, or obtuſe angled ideas. And if theſe attributes do not belong to ideas, it follows neceſſarily, that a triangle is not an idea. The ſame reaſoning may be applied to every other univerſal.

Ideas are ſaid to have a real exiſtence in the mind, at leaſt, while we think of them; but univerſals have no real exiſtence. When we aſcribe exiſtence to them, it is not an exiſtence in time or place, but exiſtence in ſome individual ſubject; and this exiſtence means no more but that they are truly attributes of ſuch a ſubject. Their exiſtence is nothing but predicability, or the capacity of being attributed to a ſubject. The name of predicables, which was given them in ancient philoſophy, is that which moſt properly expreſſes their nature.

2. I think it muſt be granted, in the *ſecond* place, that univerſals cannot be the objects of imagination, when we take that word in its ſtrict and proper ſenſe. "I find, ſays BERKELEY, "I have a "faculty of imagining or repreſenting to myſelf the ideas of "thoſe particular things I have perceived, and of variouſly com- "pounding and dividing them. I can imagine a man with two "heads, or the upper parts of a man joined to the body of a "horſe. I can imagine the hand, the eye, the noſe, each by it- "ſelf, abſtracted or ſeparated from the reſt of the body. But "then, whatever hand or eye I imagine, it muſt have ſome par- "ticular ſhape or colour. Likewiſe, the idea of a man that I "frame to myſelf muſt be either of a white, or a black, or a tawny, "a ſtraight or a crooked, a tall, or a low, or a middle-ſized man."

I believe every man will find in himſelf what this ingenious author found, that he cannot imagine a man without colour, or ſtature, or ſhape.

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Imagination, as we before obſerved, properly ſignifies a conception of the appearance an object would make to the eye, if actually ſeen. An univerſal is not an object of any external ſenſe, and therefore cannot be imagined; but it may be diſtinctly conceived. When Mr POPE ſays, "The proper ſtudy of mankind is "man," I conceive his meaning diſtinctly, though I neither imagine a black or a white, a crooked or a ſtraight man. The diſtinction between conception and imagination is real, though it be too often overlooked, and the words taken to be ſynonimous. I can conceive a thing that is impoſſible, but I cannot diſtinctly imagine a thing that is impoſſible. I can conceive a propoſition or a demonſtration, but I cannot imagine either. I can conceive underſtanding and will, virtue and vice, and other attributes of mind, but I cannot imagine them. In like manner, I can diſtinctly conceive univerſals, but I cannot imagine them.

As to the manner how we conceive univerſals, I confeſs my ignorance. I know not how I hear, or ſee, or remember, and as little do I know how I conceive things that have no exiſtence. In all our original faculties, the fabric and manner of operation is, I apprehend, beyond our comprehenſion, and perhaps is perfectly underſtood by him only who made them.

But we ought not to deny a fact of which we are conſcious, though we know not how it is brought about. And I think we may be certain that univerſals are not conceived by means of images of them in our minds, becauſe there can be no image of an univerſal.

3. It ſeems to me, that on this queſtion Mr LOCKE and his two antagoniſts have divided the truth between them. He ſaw very clearly, that the power of forming abſtract and general conceptions is one of the moſt diſtinguiſhing powers of the human mind, and puts a ſpecific difference between man and the brute creation. But he did not ſee that this power is perfectly irreconcileable to his doctrine concerning ideas.

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His opponents ſaw this inconſiſtency; but, inſtead of rejecting the hypotheſis of ideas, they explain away the power of abſtraction, and leave no ſpecific diſtinction between the human underſtanding and that of brutes.

4. BERKELEY, in his reaſoning againſt abſtract general ideas, ſeems unwillingly or unwarily to grant all that is neceſſary to ſupport abſtract and general conceptions.

" A man, he ſays, may conſider a figure merely as triangular, " without attending to the particular qualities of the angles, or " relations of the ſides. So far he may abſtract. But this will " never prove that he can frame an abſtract general inconſiſtent " idea of a triangle."

If a man may conſider a figure merely as triangular, he muſt have ſome conception of this object of his conſideration: For no man can conſider a thing which he does not conceive. He has a conception, therefore, of a triangular figure, merely as ſuch. I know no more that is meant by an abſtract general conception of a triangle.

He that conſiders a figure merely as triangular, muſt underſtand what is meant by the word triangular. If to the conception he joins to this word, he adds any particular quality of angles or relation of ſides, he miſunderſtands it, and does not conſider the figure merely as triangular. Whence I think it is evident, that he who conſiders a figure merely as triangular muſt have the conception of a triangle, abſtracting from any quality of angles or relation of ſides.

The Biſhop, in like manner, grants, " That we may conſider " PETER ſo far forth as man, or ſo far forth as animal, without " framing the forementioned abſtract idea, in as much as all that " is perceived is not conſidered." It may here be obſerved, that

CHAP. VI. he who conſiders PETER ſo far forth as man, or ſo far forth as animal, muſt conceive the meaning of thoſe abſtract general words *man* and *animal*, and he who conceives the meaning of them, has an abſtract general conception.

From theſe conceſſions, one would be apt to conclude that the Biſhop thinks that we can abſtract, but that we cannot frame abſtract ideas; and in this I ſhould agree with him. But I cannot reconcile his conceſſions with the general principle he lays down before. "To be plain," ſays he, "I deny that I can abſtract one from ano-"ther, or conceive ſeparately thoſe qualities which it is impoſſible "ſhould exiſt ſo ſeparated." This appears to me inconſiſtent with the conceſſions above mentioned, and inconſiſtent with experience.

If we can conſider a figure merely as triangular, without attending to the particular quality of the angles or relation of the ſides, this, I think, is conceiving ſeparately things which cannot exiſt ſo ſeparated: For ſurely a triangle cannot exiſt without a particular quality of angles and relation of ſides. And it is well known from experience, that a man may have a diſtinct conception of a triangle, without having any conception or knowledge of many of the properties without which a triangle cannot exiſt.

Let us next conſider the Biſhop's notion of generaliſing. He does not abſolutely deny that there are general ideas, but only that there are abſtract general ideas. "An idea," he ſays, "which, "conſidered in itſelf, is particular, becomes general, by being "made to repreſent or ſtand for all other particular ideas of the "ſame ſort. To make this plain by an example, Suppoſe a Geo-"metrician is demonſtrating the method of cutting a line in two "equal parts. He draws, for inſtance, a black line of an inch "in length. This, which is in itſelf a particular line, is never-"theleſs, with regard to its ſignification, general; ſince, as it is "there uſed, it repreſents all particular lines whatſoever; ſo that "what is demonſtrated of it, is demonſtrated of all lines, or, in "other

" other words, of a line in general. And as that particular line CHAP. VI.
" becomes general by being made a ſign, ſo the name *line*, which,
" taken abſolutely, is particular, by being a ſign, is made general."

Here I obſerve, that when a particular idea is made a ſign to repreſent and ſtand for all of a ſort, this ſuppoſes a diſtinction of things into ſorts or ſpecies. To be of a ſort implies having thoſe attributes which characteriſe the ſort, and are common to all the individuals that belong to it. There cannot, therefore, be a ſort without general attributes, nor can there be any conception of a ſort without a conception of thoſe general attributes which diſtinguiſh it. The conception of a ſort, therefore, is an abſtract general conception.

The particular idea cannot ſurely be made a ſign of a thing of which we have no conception. I do not ſay that you muſt have an idea of the ſort, but ſurely you ought to underſtand or conceive what it means, when you make a particular idea a repreſentative of it, otherwiſe your particular idea repreſents, you know not what.

When I demonſtrate any general property of a triangle, ſuch as, that the three angles are equal to two right angles, I muſt underſtand or conceive diſtinctly what is common to all triangles. I muſt diſtinguiſh the common attributes of all triangles from thoſe wherein particular triangles may differ. And if I conceive diſtinctly what is common to all triangles, without confounding it with what is not ſo, this is to form a general conception of a triangle. And without this, it is impoſſible to know that the demonſtration extends to all triangles.

The Biſhop takes particular notice of this argument, and makes this anſwer to it. " Though the idea I have in view, whilſt I make
" the demonſtration, be, for inſtance, that of an iſoſceles rectan-
" gular triangle, whoſe ſides are of a determinate length, I may
" nevertheleſs

CHAP. VI. " nevertheleſs be certain that it extends to all other rectilinear " triangles, of what ſort or bigneſs ſoever; and that becauſe nei- " ther the right angle, nor the equality or determinate length of " the ſides, are at all concerned in the demonſtration."

But if he do not, in the idea he has in view, clearly diſtinguiſh what is common to all triangles from what is not, it would be impoſſible to diſcern whether ſomething that is not common be concerned in the demonſtration or not. In order, therefore, to perceive that the demonſtration extends to all triangles, it is neceſſary to have a diſtinct conception of what is common to all triangles, excluding from that conception all that is not common. And this is all I underſtand by an abſtract general conception of a triangle.

BERKELEY catches an advantage to his ſide of the queſtion, from what Mr LOCKE expreſſes (too ſtrongly indeed) of the difficulty of framing abſtract general ideas, and the pains and ſkill neceſſary for that purpoſe. From which the Biſhop infers, that a thing ſo difficult cannot be neceſſary for communication by language, which is ſo eaſy and familiar to all ſorts of men.

There may be ſome abſtract and general conceptions that are difficult, or even beyond the reach of perſons of weak underſtanding; but there are innumerable, which are not beyond the reach of children. It is impoſſible to learn language without acquiring general conceptions; for there cannot be a ſingle ſentence without them. I believe the forming theſe, and being able to articulate the ſounds of language, make up the whole difficulty that children find in learning language at firſt.

But this difficulty, we ſee, they are able to overcome ſo early as not to remember the pains it coſt them. They have the ſtrongeſt inducement to exert all their labour and ſkill, in order to underſtand, and to be underſtood; and they no doubt do ſo.

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The labour of forming abſtract notions, is the labour of learning to ſpeak, and to underſtand what is ſpoken. As the words of every language, excepting a few proper names, are general words, the minds of children are furniſhed with general conceptions, in proportion as they learn the meaning of general words. I believe moſt men have hardly any general notions but thoſe which are expreſſed by the general words they hear and uſe in converſation. The meaning of ſome of theſe is learned by a definition, which at once conveys a diſtinct and accurate general conception. The meaning of other general words we collect, by a kind of induction, from the way in which we ſee them uſed on various occaſions by thoſe who underſtand the language. Of theſe our conception is often leſs diſtinct, and in different perſons is perhaps not perfectly the ſame.

" Is it not a hard thing, ſays the Biſhop, that a couple of chil-
" dren cannot prate together of their ſugar-plumbs and rattles,
" and the reſt of their little trinkets, till they have firſt tacked to-
" gether numberleſs inconſiſtencies, and ſo formed in their minds
" abſtract general ideas, and annexed them to every common name
" they make uſe of."

However hard a thing it may be, it is an evident truth, that a couple of children, even about their ſugar-plumbs and their rattles, cannot prate ſo as to underſtand, and be underſtood, until they have learned to conceive the meaning of many general words, and this, I think, is to have general conceptions.

5. Having conſidered the ſentiments of Biſhop BERKELEY on this ſubject, let us next attend to thoſe of Mr HUME, as they are expreſſed, part 1. ſect. 7. Treatiſe of Human Nature. He agrees perfectly with the Biſhop, " That all general ideas are nothing
" but particular ones annexed to a certain term, which gives them
" a more extenſive ſignification, and makes them recal upon occa-
" ſion other individuals which are ſimilar to them. A particular
" idea

CHAP. VI. "idea becomes general, by being annexed to a general term; that "is, to a term, which, from a cuſtomary conjunction, has a re- "lation to many other particular ideas, and readily recals them in "the imagination. Abſtract ideas are therefore in themſelves in- "dividual, however they may become general in their repreſenta- "tion. The image in the mind is only that of a particular ob- "ject, though the application of it in our reaſoning be the ſame "as if it was univerſal."

Although Mr HUME looks upon this to be one of the greateſt and moſt valuable diſcoveries that has been made of late years in the republic of letters, it appears to be no other than the opinion of the Nominaliſts, about which ſo much diſpute was held from the beginning of the twelfth century down to the reformation, and which was afterwards ſupported by Mr HOBBES. I ſhall briefly conſider the arguments, by which Mr HUME hopes to have put it beyond all doubt and controverſy.

Firſt, He endeavours to prove, by three arguments, that it is utterly impoſſible to conceive any quantity or quality, without forming a preciſe notion of its degrees.

This is indeed a great undertaking; but if he could prove it, it is not ſufficient for his purpoſe; for two reaſons.

Firſt, Becauſe there are many attributes of things, beſides quantity and quality; and it is incumbent upon him to prove, that it is impoſſible to conceive any attribute, without forming a preciſe notion of its degree. Each of the ten categories of ARISTOTLE is a genus, and may be an attribute: And if he ſhould prove of two of them, to wit, quantity and quality, that there can be no general conception of them; there remain eight behind, of which this muſt be proved.

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The other reaſon is, becauſe, though it were impoſſible to conceive any quantity or quality, without forming a preciſe notion of its degree, it does not follow that it is impoſſible to have a general conception even of quantity and quality. The conception of a pound troy is the conception of a quantity, and of the preciſe degree of that quantity; but it is an abſtract general conception notwithſtanding, becauſe it may be the attribute of many individual bodies, and of many kinds of bodies. He ought therefore to have proved, that we cannot conceive quantity or quality, or any other attribute, without joining it inſeparably to ſome individual ſubject.

This remains to be proved, which will be found no eaſy matter. For inſtance, I conceive what is meant by a Japaneſe as diſtinctly as what is meant by an Engliſhman or a Frenchman. It is true, a Japaneſe is neither quantity nor quality, but it is an attribute common to every individual of a populous nation. I never ſaw an individual of that nation, and, if I can truſt my conſciouſneſs, the general term does not lead me to imagine one individual of the ſort as a repreſentative of all others.

Though Mr HUME, therefore, undertakes much, yet, if he could prove all he undertakes to prove, it would by no means be ſufficient to ſhew that we have no abſtract general conceptions.

Paſſing this, let us attend to his arguments for proving this extraordinary poſition, that it is impoſſible to conceive any quantity or quality, without forming a preciſe notion of its degree.

The firſt argument is, that it is impoſſible to diſtinguiſh things that are not actually ſeparable. "The preciſe length of a line is "not different or diſtinguiſhable from the line."

I have before endeavoured to ſhew, that things inſeparable in

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their nature may be diſtinguiſhed in our conception. And we need go no farther to be convinced of this, than the inſtance here brought to prove the contrary. The preciſe length of a line, he ſays, is not diſtinguiſhable from the line. When I ſay, *this is a line*, I ſay and mean one thing. When I ſay *it is a line of three inches*, I ſay and mean another thing. If this be not to diſtinguiſh the preciſe length of the line from the line, I know not what it is to diſtinguiſh.

Second argument. "Every object of ſenſe, that is, every impreſſion, is an individual, having its determinate degrees of quantity and quality: But whatever is true of the impreſſion is true of the idea, as they differ in nothing but their ſtrength and vivacity."

The concluſion in this argument is indeed juſtly drawn from the premiſes. If it be true that ideas differ in nothing from objects of ſenſe but in ſtrength and vivacity, as it muſt be granted that all the objects of ſenſe are individuals, it will certainly follow that all ideas are individuals. Granting therefore the juſtneſs of this concluſion, I beg leave to draw two other concluſions from the ſame premiſes, which will follow no leſs neceſſarily.

Firſt, If ideas differ from the objects of ſenſe only in ſtrength and vivacity, it will follow, that the idea of a lion is a lion of leſs ſtrength and vivacity. And hence may ariſe a very important queſtion, Whether the idea of a lion may not tear in pieces, and devour the ideas of ſheep, oxen, and horſes, and even of men, women, and children?

Secondly, If ideas differ only in ſtrength and vivacity from the objects of ſenſe, it will follow, that objects, merely conceived, are not ideas; for ſuch objects differ from the objects of ſenſe in reſpects of a very different nature from ſtrength and vivacity. Every object

object of ſenſe muſt have a real exiſtence, and time and place: But things merely conceived may neither have exiſtence, nor time nor place; and therefore, though there ſhould be no abſtract ideas, it does not follow, that things abſtract and general may not be conceived.

The third argument is this: "It is a principle generally received "in philoſophy, that every thing in nature is individual; and that "it is utterly abſurd to ſuppoſe a triangle really exiſtent, which "has no preciſe proportion of ſides and angles. If this, therefore, "be abſurd in fact and reality, it muſt be abſurd in idea, ſince "nothing of which we can form a clear and diſtinct idea is abſurd "or impoſſible."

I acknowledge it to be impoſſible, that a triangle ſhould really exiſt which has no preciſe proportion of ſides and angles; and impoſſible that any being ſhould exiſt which is not an individual being; for, I think, a being and an individual being mean the ſame thing: But that there can be no attributes common to many individuals, I do not acknowledge. Thus, to many figures that really exiſt, it may be common that they are triangles; and to many bodies that exiſt, it may be common that they are fluid. Triangle and fluid are not beings, they are attributes of beings.

As to the principle here aſſumed, that nothing of which we can form a clear and diſtinct idea is abſurd or impoſſible, I refer to what was ſaid upon it, chap. 3. Eſſay 4. It is evident, that in every mathematical demonſtration, *ad abſurdum*, of which kind almoſt one half of mathematics conſiſts, we are required to ſuppoſe, and conſequently to conceive a thing that is impoſſible. From that ſuppoſition we reaſon, until we come to a concluſion that is not only impoſſible but abſurd. From this we infer, that the propoſition ſuppoſed at firſt is impoſſible, and therefore that its contradictory is true.

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As this is the nature of all demonſtrations, *ad abſurdum*, it is evident, (I do not ſay that we can have a clear and diſtinct idea,) but that we can clearly and diſtinctly conceive things impoſſible.

The reſt of Mr HUME's diſcourſe upon this ſubject is employed in explaining how an individual idea, annexed to a general term, may ſerve all the purpoſes in reaſoning, which have been aſcribed to abſtract general ideas.

" When we have found a reſemblance among ſeveral objects " that often occur to us, we apply the ſame name to all of them, " whatever differences we may obſerve in the degrees of their " quantity and quality, and whatever other differences may ap- " pear among them. After we have acquired a cuſtom of this " kind, the hearing of that name revives the idea of one of theſe " objects, and makes the imagination conceive it, with all its cir- " cumſtances and proportions." But along with this idea, there is a readineſs to ſurvey any other of the individuals to which the name belongs, and to obſerve, that no concluſion be formed contrary to any of them. If any ſuch concluſion is formed, thoſe individual ideas which contradict it, immediately crowd in upon us, and make us perceive the falſehood of the propoſition. If the mind ſuggeſt not always theſe ideas upon occaſion, it proceeds from ſome imperfection in its faculties; and ſuch a one as is often the ſource of falſe reaſoning and ſophiſtry.

This is in ſubſtance the way in which he accounts for what he calls " the foregoing paradox, that ſome ideas are particular in their nature, but general in their repreſentation." Upon this account I ſhall make ſome remarks.

1. He allows that we find a reſemblance among ſeveral objects, and ſuch a reſemblance as leads us to apply the ſame name to all of them. This conceſſion is ſufficient to ſhew that we have general conceptions.

conceptions. There can be no reſemblance in objects that have no common attribute; and if there be attributes belonging in common to ſeveral objects, and in man a faculty to obſerve and conceive theſe, and to give names to them, this is to have general conceptions.

I believe indeed we may have an indiſtinct perception of reſemblance, without knowing wherein it lies. Thus, I may ſee a reſemblance between one face and another, when I cannot diſtinctly ſay in what feature they reſemble: But by analyſing the two faces, and comparing feature with feature, I may form a diſtinct notion of that which is common to both. A painter, being accuſtomed to an analyſis of this kind, would have formed a diſtinct notion of this reſemblance at firſt ſight; to another man it may require ſome attention.

There is therefore an indiſtinct notion of reſemblance when we compare the objects only in groſs; and this I believe brute animals may have. There is alſo a diſtinct notion of reſemblance, when we analyſe the objects into their different attributes, and perceive them to agree in ſome, while they differ in others. It is in this caſe only that we give a name to the attributes wherein they agree, which muſt be a common name, becauſe the thing ſignified by it is common. Thus, when I compare cubes of different matter, I perceive them to have this attribute in common, that they are comprehended under ſix equal ſquares; and this attribute only, is ſignified by applying the name of *cube* to them all. When I compare clean linen with ſnow, I perceive them to agree in colour; and when I apply the name of white to both, this name ſignifies neither ſnow nor clean linen, but the attribute which is common to both.

2. The author ſays, that when we have found a reſemblance among ſeveral objects, we apply the ſame name to all of them.

It

CHAP. VI. It muſt here be obſerved, that there are two kinds of names which the author ſeems to confound, though they are very different in nature, and in the power they have in language. There are proper names, and there are common names or appellatives. The firſt are the names of individuals. The ſame proper name is never applied to ſeveral individuals on account of their ſimilitude, becauſe the very intention of a proper name is to diſtinguiſh one individual from all others; and hence it is a maxim in grammar, that proper names have no plural number. A proper name ſignifies nothing but the individual whoſe name it is; and when we apply it to the individual, we neither affirm nor deny any thing concerning him.

A common name or appellative is not the name of any individual, but a general term, ſignifying ſomething that is or may be common to ſeveral individuals. Common names therefore ſignify common attributes. Thus, when I apply the name of ſon or brother to ſeveral perſons, this ſignifies and affirms that this attribute is common to all of them.

From this it is evident, that the applying the ſame name to ſeveral individuals, on account of their reſemblance, can, in conſiſtence with grammar and common ſenſe, mean nothing elſe than the expreſſing by a general term ſomething that is common to thoſe individuals, and which therefore may be truly affirmed of them all.

3. The author ſays, " It is certain that we form the idea of in-
" dividuals, whenever we uſe any general term. The word raiſes
" up an individual idea, and makes the imagination conceive it,
" with all its particular circumſtances and proportions."

This fact he takes a great deal of pains to account for, from the effect of cuſtom.

But

But the fact ſhould be aſcertained before we take pains to account for it. I can ſee no reaſon to believe the fact; and I think a farmer can talk of his ſheep, and his black cattle, without conceiving, in his imagination one individual, with all its circumſtances and proportions. If this be true, the whole of his theory of general ideas falls to the ground. To me it appears, that when a general term is well underſtood, it is only by accident if it ſuggeſt ſome individual of the kind; but this effect is by no means conſtant.

I underſtand perfectly what Mathematicians call a line of the fifth order; yet I never conceived in my imagination any one of the kind in all its circumſtances and proportions. Sir ISAAC NEWTON firſt formed a diſtinct general conception of lines of the third order; and afterwards, by great labour and deep penetration, found out and deſcribed the particular ſpecies comprehended under that general term. According to Mr HUME's theory, he muſt firſt have been acquainted with the particulars, and then have learned by cuſtom to apply one general name to all of them.

The author obſerves, "That the idea of an equilateral triangle "of an inch perpendicular, may ſerve us in talking of a figure, a "rectilinear figure, a regular figure, a triangle, and an equilateral "triangle."

I anſwer, The man that uſes theſe general terms, either underſtands their meaning, or he does not. If he does not underſtand their meaning, all his talk about them will be ſound only without ſenſe, and the particular idea mentioned cannot enable him to ſpeak of them with underſtanding. If he underſtands the meaning of the general terms, he will find no uſe for the particular idea.

4. He tells us gravely, "That in a globe of white marble the "figure and the colour are undiſtinguiſhable, and are in effect the "ſame."

CHAP. VI.

" ſame." How fooliſh have mankind been to give different names, in all ages and in all languages, to things undiſtinguiſhable, and in effect the ſame? Henceforth, in all books of ſcience and of entertainment, we may ſubſtitute figure for colour, and colour for figure. By this we ſhall make numberleſs curious diſcoveries, without danger of error.

ESSAY

ESSAY VI.

OF JUDGMENT.

CHAP. I.

Of Judgment in general.

JUDGING is an operation of the mind ſo familiar to every man who hath underſtanding, and its name is ſo common and ſo well underſtood, that it needs no definition.

As it is impoſſible by a definition to give a notion of colour to a man who never ſaw colours; ſo it is impoſſible by any definition to give a diſtinct notion of judgment to a man who has not often judged, and who is not capable of reflecting attentively upon this act of his mind. The beſt uſe of a definition is to prompt him to that reflection; and without it the beſt definition will be apt to miſlead him.

The definition commonly given of judgment, by the more ancient writers in logic, was, that it is an act of the mind, whereby one thing is affirmed or denied of another. I believe this is as good a definition of it as can be given. Why I prefer it to ſome later definitions, will afterwards appear. Without pretending to give any other, I ſhall make two remarks upon it, and then offer ſome general obſervations on this ſubject.

CHAP. I.

1. It is true, that it is by affirmation or denial that we expreſs our judgments; but there may be judgment which is not expreſsed. It is a ſolitary act of the mind, and the expreſſion of it by affirmation or denial is not at all eſſential to it. It may be tacit, and not expreſſed. Nay, it is well known that men may judge contrary to what they affirm or deny; the definition therefore muſt be underſtood of mental affirmation or denial, which indeed is only another name for judgment.

2. Affirmation and denial is very often the expreſſion of teſtimony, which is a different act of the mind, and ought to be diſtinguiſhed from judgment.

A judge aſks of a witneſs what he knows of ſuch a matter to which he was an eye or ear witneſs. He anſwers, by affirming or denying ſomething. But his anſwer does not expreſs his judgment; it is his teſtimony. Again, I aſk a man his opinion in a matter of ſcience or of criticiſm. His anſwer is not teſtimony; it is the expreſſion of his judgment.

Teſtimony is a ſocial act, and it is eſſential to it to be expreſſed by words or ſigns. A tacit teſtimony is a contradiction: But there is no contradiction in a tacit judgment; it is complete without being expreſſed.

In teſtimony a man pledges his veracity for what he affirms; ſo that a falſe teſtimony is a lie: But a wrong judgment is not a lie; it is only an error.

I believe, in all languages teſtimony and judgment are expreſſed by the ſame form of ſpeech. A propoſition affirmative or negative, with a verb in what is called the indicative mood, expreſſes both. To diſtinguiſh them by the form of ſpeech, it would be neceſſary that verbs ſhould have two indicative moods, one for teſtimony, and another to expreſs judgment. I know not that this is found

found in any language. And the reaſon is, (not ſurely that the vulgar cannot diſtinguiſh the two, for every man knows the difference between a lie and an error of judgment), but that, from the matter and circumſtances, we can eaſily ſee whether a man intends to give his teſtimony, or barely to expreſs his judgment.

Although men muſt have judged in many caſes before tribunals of juſtice were erected, yet it is very probable that there were tribunals before men began to ſpeculate about judgment, and that the word may be borrowed from the practice of tribunals. As a judge, after taking the proper evidence, paſſes ſentence in a cauſe, and that ſentence is called his judgment; ſo the mind, with regard to whatever is true or falſe, paſſes ſentence, or determines according to the evidence that appears. Some kinds of evidence leave no room for doubt. Sentence is paſſed immediately, without ſeeking or hearing any contrary evidence, becauſe the thing is certain and notorious. In other caſes, there is room for weighing evidence on both ſides before ſentence is paſſed. The analogy between a tribunal of juſtice and this inward tribunal of the mind, is too obvious to eſcape the notice of any man who ever appeared before a judge. And it is probable, that the word *judgment*, as well as many other words we uſe in ſpeaking of this operation of mind, are grounded on this analogy.

Having premiſed theſe things, that it may be clearly underſtood what I mean by judgment, I proceed to make ſome general obſervations concerning it.

Firſt, Judgment is an act of the mind ſpecifically different from ſimple apprehenſion, or the bare conception of a thing. It would be unneceſſary to obſerve this, if ſome Philoſophers had not been led by their theories to a contrary opinion.

Although there can be no judgment without a conception of the things about which we judge; yet conception may be without any

CHAP. I. judgment. Judgment can be expreſſed by a propoſition only, and a propoſition is a complete ſentence; but ſimple apprehenſion may be expreſſed by a word or words, which make no complete ſentence. When ſimple apprehenſion is employed about a propoſition, every man knows that it is one thing to apprehend a propoſition, that is, to conceive what it means; but it is quite another thing to judge it to be true or falſe.

It is ſelf-evident, that every judgment muſt be either true or falſe; but ſimple apprehenſion or conception can neither be true nor falſe, as was ſhewn before.

One judgment may be contradictory to another; and it is impoſſible for a man to have two judgments at the ſame time, which he perceives to be contradictory. But contradictory propoſitions may be conceived at the ſame time without any difficulty. That the ſun is greater than the earth, and that the ſun is not greater than the earth, are contradictory propoſitions. He that apprehends the meaning of one, apprehends the meaning of both. But it is impoſſible for him to judge both to be true at the ſame time. He knows that if the one is true, the other muſt be falſe. For theſe reaſons, I hold it to be certain, that judgment and ſimple apprehenſion are acts of the mind ſpecifically different.

Secondly, There are notions or ideas that ought to be referred to the faculty of judgment as their ſource; becauſe, if we had not that faculty, they could not enter into our minds; and to thoſe that have that faculty, and are capable of reflecting upon its operations, they are obvious and familiar.

Among theſe we may reckon the notion of judgment itſelf; the notions of a propoſition, of its ſubject, predicate, and copula; of affirmation and negation, of true and falſe, of knowledge, belief, diſbelief, opinion, aſſent, evidence. From no ſource could we acquire theſe notions, but from reflecting upon our judgments. Relations

lations of things make one great claſs of our notions or ideas; and we cannot have the idea of any relation without ſome exerciſe of judgment, as will appear afterwards.

Thirdly, In perſons come to years of underſtanding, judgment neceſſarily accompanies all ſenſation, perception by the ſenſes, conſciouſneſs, and memory, but not conception.

I reſtrict this to perſons come to the years of underſtanding, becauſe it may be a queſtion, whether infants, in the firſt period of life, have any judgment or belief at all. The ſame queſtion may be put with regard to brutes and ſome idiots. This queſtion is foreign to the preſent ſubject; and I ſay nothing here about it, but ſpeak only of perſons who have the exerciſe of judgment.

In them it is evident, that a man who feels pain, judges and believes that he is really pained. The man who perceives an object, believes that it exiſts, and is what he diſtinctly perceives it to be; nor is it in his power to avoid ſuch judgment. And the like may be ſaid of memory, and of conſciouſneſs. Whether judgment ought to be called a neceſſary concomitant of theſe operations, or rather a part or ingredient of them, I do not diſpute; but it is certain, that all of them are accompanied with a determination that ſomething is true or falſe, and a conſequent belief. If this determination be not judgment, it is an operation that has got no name; for it is not ſimple apprehenſion, neither is it reaſoning; it is a mental affirmation or negation; it may be expreſſed by a propoſition affirmative or negative, and it is accompanied with the firmeſt belief. Theſe are the characteriſtics of judgment; and I muſt call it judgment, till I can find another name to it.

The judgments we form, are either of things neceſſary, or of things contingent. That three times three is nine; that the whole is greater than a part; are judgments about things neceſſary. Our aſſent

CHAP. I. aſſent to ſuch neceſſary propoſitions is not grounded upon any operation of ſenſe, of memory, or of conſciouſneſs, nor does it require their concurrence; it is unaccompanied by any other operation but that of conception, which muſt accompany all judgment; we may therefore call this judgment of things neceſſary pure judgment. Our judgment of things contingent muſt always reſt upon ſome other operation of the mind, ſuch as ſenſe, or memory, or conſciouſneſs, or credit in teſtimony, which is itſelf grounded upon ſenſe.

That I now write upon a table covered with green cloth, is a contingent event, which I judge to be moſt undoubtedly true. My judgment is grounded upon my perception, and is a neceſſary concomitant or ingredient of my perception. That I dined with ſuch a company yeſterday, I judge to be true, becauſe I remember it; and my judgment neceſſarily goes along with this remembrance, or makes a part of it.

There are many forms of ſpeech in common language which ſhew that the ſenſes, memory and conſciouſneſs, are conſidered as judging faculties. We ſay that a man judges of colours by his eye, of ſounds by his ear. We ſpeak of the evidence of ſenſe, the evidence of memory, the evidence of conſciouſneſs. Evidence is the ground of judgment, and when we ſee evidence, it is impoſſible not to judge.

When we ſpeak of ſeeing or remembering any thing, we indeed hardly ever add that we judge it to be true. But the reaſon of this appears to be, that ſuch an addition would be mere ſuperfluity of ſpeech, becauſe every one knows, that what I ſee or remember, I muſt judge to be true, and cannot do otherwiſe.

And for the ſame reaſon, in ſpeaking of any thing that is ſelf-evident or ſtrictly demonſtrated, we do not ſay that we judge it to be true. This would be ſuperfluity of ſpeech, becauſe every man

man knows that we muſt judge that to be true which we hold ſelf-evident or demonſtrated.

When you ſay you ſaw ſuch a thing, or that you diſtinctly remember it, or when you ſay of any propoſition that it is ſelf-evident, or ſtrictly demonſtrated, it would be ridiculous after this to aſk whether you judge it to be true; nor would it be leſs ridiculous in you to inform us that you do. It would be a ſuperfluity of ſpeech of the ſame kind as if, not content with ſaying that you ſaw ſuch an object, you ſhould add that you ſaw it with your eyes.

There is therefore good reaſon why, in ſpeaking or writing, judgment ſhould not be expreſsly mentioned, when all men know it to be neceſſarily implied; that is, when there can be no doubt. In ſuch caſes, we barely mention the evidence. But when the evidence mentioned leaves room for doubt, then, without any ſuperfluity or tautology, we ſay we judge the thing to be ſo, becauſe this is not implied in what was ſaid before. A woman with child never ſays, that, going ſuch a journey, ſhe carried her child along with her. We know that, while it is in her womb, ſhe muſt carry it along with her. There are ſome operations of mind that may be ſaid to carry judgment in their womb, and can no more leave it behind them than the pregnant woman can leave her child. Therefore, in ſpeaking of ſuch operations, it is not expreſſed.

Perhaps this manner of ſpeaking may have led Philoſophers into the opinion, that in perception by the ſenſes, in memory, and in conſciouſneſs, there is no judgment at all. Becauſe it is not mentioned in ſpeaking of theſe faculties, they conclude that it does not accompany them; that they are only different modes of ſimple apprehenſion, or of acquiring ideas; and that it is no part of their office to judge.

CHAP. I.

I apprehend the ſame cauſe has led Mr LOCKE into a notion of judgment which I take to be peculiar to him. He thinks that the mind has two faculties converſant about truth and falſehood. *Firſt*, knowledge; and, *ſecondly*, judgment. In the firſt, the perception of the agreement or diſagreement of the ideas is certain. In the ſecond, it is not certain, but probable only.

According to this notion of judgment, it is not by judgment that I perceive that two and three make five; it is by the faculty of knowledge. I apprehend there can be no knowledge without judgment, though there may be judgment without that certainty which we commonly call knowledge.

Mr LOCKE, in another place of his Eſſay, tells us, "That the "notice we have by our ſenſes of the exiſtence of things without "us, though not altogether ſo certain as our intuitive knowledge, "or the deductions of our reaſon about abſtract ideas, yet is an "aſſurance that deſerves the name of knowledge." I think, by this account of it, and by his definitions before given of knowledge and judgment, it deſerves as well the name of *judgment*.

That I may avoid diſputes about the meaning of words, I wiſh the reader to underſtand, that I give the name of judgment to every determination of the mind concerning what is true or what is falſe. This, I think, is what Logicians, from the days of ARISTOTLE, have called judgment. Whether it be called one faculty, as I think it has always been, or whether a Philoſopher chuſes to ſplit it into two, ſeems not very material. And if it be granted, that by our ſenſes, our memory and conſciouſneſs, we not only have ideas or ſimple apprehenſions, but form determinations concerning what is true, and what is falſe; whether theſe determinations ought to be called *knowledge* or *judgment*, is of ſmall moment.

The judgments grounded upon the evidence of ſenſe, of memory, and

and of conſciouſneſs, put all men upon a level. The Philoſopher, with regard to theſe, has no prerogative above the illiterate, or even above the ſavage.

Their reliance upon the teſtimony of theſe faculties is as firm and as well grounded as his. His ſuperiority is in judgments of another kind; in judgments about things abſtract and neceſſary. And he is unwilling to give the name of judgment to that wherein the moſt ignorant and unimproved of the ſpecies are his equals.

But Philoſophers have never been able to give any definition of judgment which does not apply to the determinations of our ſenſes, our memory, and conſciouſneſs, nor any definition of ſimple apprehenſion which can comprehend thoſe determinations.

Our judgments of this kind are purely the gift of Nature, nor do they admit of improvement by culture. The memory of one man may be more tenacious than that of another; but both rely with equal aſſurance upon what they diſtinctly remember. One man's ſight may be more acute, or his feeling more delicate than that of another; but both give equal credit to the diſtinct teſtimony of their ſight and touch.

And as we have this belief by the conſtitution of our nature, without any effort of our own, ſo no effort of ours can overturn it.

The Sceptic may perhaps perſuade himſelf in general, that he has no ground to believe his ſenſes or his memory: But, in particular caſes that are intereſting, his diſbelief vaniſhes, and he finds himſelf under a neceſſity of believing both.

Theſe judgments may, in the ſtricteſt ſenſe, be called *judgments of nature*. Nature has ſubjected us to them whether we will or not. They are neither got, nor can they be loſt by any uſe or abuſe of our faculties; and it is evidently neceſſary for our pre-

 ſervation

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ſervation that it ſhould be ſo. For if belief in our ſenſes and in our memory were to be learned by culture, the race of men would periſh before they learned this leſſon. It is neceſſary to all men for their being and preſervation, and therefore is unconditionally given to all men by the Author of Nature.

I acknowledge, that if we were to reſt in thoſe judgments of Nature of which we now ſpeak, without building others upon them, they would not entitle us to the denomination of reaſonable beings. But yet they ought not to be deſpiſed, for they are the foundation upon which the grand ſuperſtructure of human knowledge muſt be raiſed. And as in other ſuperſtructures the foundation is commonly overlooked, ſo it has been in this. The more ſublime attainments of the human mind have attracted the attention of Philoſophers, while they have beſtowed but a careleſs glance upon the humble foundation on which the whole fabric reſts.

A fourth obſervation is, that ſome exerciſe of judgment is neceſſary in the formation of all abſtract and general conceptions, whether more ſimple or more complex; in dividing, in defining, and in general, in forming all clear and diſtinct conceptions of things, which are the only fit materials of reaſoning.

Theſe operations are allied to each other, and therefore I bring them under one obſervation. They are more allied to our rational nature than thoſe mentioned in the laſt obſervation, and therefore are conſidered by themſelves.

That I may not be miſtaken, it may be obſerved, that I do not ſay that abſtract notions, or other accurate notions of things, after they have been formed, cannot be barely conceived without any exerciſe of judgment about them. I doubt not that they may: But what I ſay, is, that, in their formation in the mind at firſt, there muſt be ſome exerciſe of judgment.

It

It is impoſſible to diſtinguiſh the different attributes belonging to the ſame ſubject, without judging that they are really different and diſtinguiſhable, and that they have that relation to the ſubject which Logicians expreſs, by ſaying that they may be predicated of it. We cannot generaliſe, without judging that the ſame attribute does or may belong to many individuals. It has been ſhewn, that our ſimpleſt general notions are formed by theſe two operations of diſtinguiſhing and generaliſing; judgment therefore is exerciſed in forming the ſimpleſt general notions.

In thoſe that are more complex, and which have been ſhewn to be formed by combining the more ſimple, there is another act of the judgment required; for ſuch combinations are not made at random, but for an end; and judgment is employed in fitting them to that end. We form complex general notions for conveniency of arranging our thoughts in diſcourſe and reaſoning; and therefore, of an infinite number of combinations that might be formed, we chuſe only thoſe that are uſeful and neceſſary.

That judgment muſt be employed in dividing as well as in diſtinguiſhing, appears evident. It is one thing to divide a ſubject properly, another to cut it in pieces. *Hoc non eſt dividere, ſed frangere rem*, ſaid CICERO, when he cenſured an improper diviſion of EPICURUS. Reaſon has diſcovered rules of diviſion, which have been known to Logicians more than two thouſand years.

There are rules likewiſe of definition of no leſs antiquity and authority. A man may no doubt divide or define properly without attending to the rules, or even without knowing them. But this can only be, when he has judgment to perceive that to be right in a particular caſe, which the rule determines to be right in all caſes.

I add in general, that, without ſome degree of judgment, we can form no accurate and diſtinct notions of things; ſo that, one

CHAP. I. province of judgment is, to aid us in forming clear and diſtinct conceptions of things, which are the only fit materials for reaſoning.

This will probably appear to be a paradox to Philoſophers, who have always conſidered the formation of ideas of every kind as belonging to ſimple apprehenſion; and that the ſole province of judgment is to put them together in affirmative or negative propoſitions; and therefore it requires ſome confirmation.

Firſt, I think it neceſſarily follows, from what has been already ſaid in this obſervation. For if, without ſome degree of judgment, a man can neither diſtinguiſh, nor divide, nor define, nor form any general notion, ſimple or complex, he ſurely, without ſome degree of judgment, cannot have in his mind the materials neceſſary to reaſoning.

There cannot be any propoſition in language which does not involve ſome general conception. The propoſition, *that I exiſt*, which DES CARTES thought the firſt of all truths, and the foundation of all knowledge, cannot be conceived without the conception of exiſtence, one of the moſt abſtract general conceptions. A man cannot believe his own exiſtence, or the exiſtence of any thing he ſees or remembers, until he has ſo much judgment as to diſtinguiſh things that really exiſt from things which are only conceived. He ſees a man ſix feet high; he conceives a man ſixty feet high; he judges the firſt object to exiſt, becauſe he ſees it; the ſecond he does not judge to exiſt, becauſe he only conceives it. Now, I would aſk, Whether he can attribute exiſtence to the firſt object, and not to the ſecond, without knowing what exiſtence means? It is impoſſible.

How early the notion of exiſtence enters into the mind, I cannot determine; but it muſt certainly be in the mind, as ſoon as we can affirm of any thing, with underſtanding, that it exiſts.

In

In every other propoſition, the predicate at leaſt muſt be a general notion; a predicable and an univerſal being one and the ſame. Beſides this, every propoſition either affirms or denies. And no man can have a diſtinct conception of a propoſition, who does not underſtand diſtinctly the meaning of affirming or denying: But theſe are very general conceptions, and, as was before obſerved, are derived from judgment, as their ſource and origin.

I am ſenſible that a ſtrong objection may be made to this reaſoning, and that it may ſeem to lead to an abſurdity, or a contradiction. It may be ſaid, that every judgment is a mental affirmation or negation. If therefore ſome previous exerciſe of judgment be neceſſary to underſtand what is meant by affirmation or negation, the exerciſe of judgment muſt go before any judgment, which is abſurd.

In like manner, every judgment may be expreſſed by a propoſition, and a propoſition muſt be conceived before we can judge of it. If therefore we cannot conceive the meaning of a propoſition without a previous exerciſe of judgment, it follows that judgment muſt be previous to the conception of any propoſition, and at the ſame time that the conception of a propoſition muſt be previous to all judgment, which is a contradiction.

The reader may pleaſe to obſerve, that I have limited what I have ſaid to diſtinct conception, and ſome degree of judgment; and it is by this means I hope to avoid this labyrinth of abſurdity and contradiction. The faculties of conception and judgment have an infancy and a maturity as man has. What I have ſaid is limited to their mature ſtate. I believe in their infant ſtate they are very weak and indiſtinct; and that, by imperceptible degrees, they grow to maturity, each giving aid to the other, and receiving aid from it. But which of them firſt began this friendly intercourſe, is beyond my ability to determine. It is like the queſtion concerning the bird and the egg.

In

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In the preſent ſtate of things, it is true that every bird comes from an egg, and every egg from a bird; and each may be ſaid to be previous to the other. But if we go back to the origin of things, there muſt have been ſome bird that did not come from any egg, or ſome egg that did not come from any bird.

In like manner, in the mature ſtate of man, diſtinct conception of a propoſition ſuppoſes ſome previous exerciſe of judgment, and diſtinct judgment ſuppoſes diſtinct conception. Each may truly be ſaid to come from the other, as the bird from the egg, and the egg from the bird. But if we trace back this ſucceſſion to its origin, that is, to the firſt propoſition that was ever conceived by the man, and the firſt judgment he ever formed, I determine nothing about them, nor do I know in what order, or how they were produced, any more than how the bones grow in the womb of her that is with child.

The firſt exerciſe of theſe faculties of conception and judgment is hid, like the ſources of the Nile, in an unknown region.

The neceſſity of ſome degree of judgment to clear and diſtinct conceptions of things, may, I think, be illuſtrated by this ſimilitude.

An artiſt, ſuppoſe a Carpenter, cannot work in his art without tools, and theſe tools muſt be made by art. The exerciſe of the art therefore is neceſſary to make the tools, and the tools are neceſſary to the exerciſe of the art. There is the ſame appearance of contradiction, as in what I have advanced concerning the neceſſity of ſome degree of judgment, in order to form clear and diſtinct conceptions of things. Theſe are the tools we muſt uſe in judging and in reaſoning, and without them muſt make very bungling work; yet theſe tools cannot be made without ſome exerciſe of judgment.

The neceſſity of ſome degree of judgment in forming accurate and

and diſtinct notions of things will farther appear, if we conſider attentively what notions we can form, without any aid of judgment, of the objects of ſenſe, of the operations of our own minds, or of the relations of things.

To begin with the objects of ſenſe. It is acknowledged on all hands, that the firſt notions we have of ſenſible objects are got by the external ſenſes only, and probably before judgment is brought forth; but theſe firſt notions are neither ſimple, nor are they accurate and diſtinct: They are groſs and indiſtinct, and like the *chaos*, a *rudis indigeſtaque moles*. Before we can have any diſtinct notion of this maſs, it muſt be analyſed; the heterogeneous parts muſt be ſeparated in our conception, and the ſimple elements, which before lay hid in the common maſs, muſt firſt be diſtinguiſhed, and then put together into one whole.

In this way it is that we form diſtinct notions even of the objects of ſenſe; but this analyſis and compoſition, by habit, becomes ſo eaſy, and is performed ſo readily, that we are apt to overlook it, and to impute the diſtinct notion we have formed of the object to the ſenſes alone; and this we are the more prone to do, becauſe, when once we have diſtinguiſhed the ſenſible qualities of the object from one another, the ſenſe gives teſtimony to each of them.

You perceive, for inſtance, an object white, round, and a foot in diameter: I grant that you perceive all theſe attributes of the object by ſenſe; but if you had not been able to diſtinguiſh the colour from the figure, and both from the magnitude, your ſenſes would only have given you one complex and confuſed notion of all theſe mingled together.

A man who is able to ſay with underſtanding, or to determine in his own mind, that this object is white, muſt have diſtinguiſhed whiteneſs from other attributes. If he has not made this diſtinction, he does not underſtand what he ſays.

Suppoſe

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Suppoſe a cube of braſs to be preſented at the ſame time to a child of a year old and to a man. The regularity of the figure will attract the attention of both. Both have the ſenſes of ſight and of touch in equal perfection; and therefore, if any thing be diſcovered in this object by the man, which cannot be diſcovered by the child, it muſt be owing, not to the ſenſes, but to ſome other faculty which the child has not yet attained.

Firſt, then, the man can eaſily diſtinguiſh the body from the ſurface which terminates it; this the child cannot do. *Secondly*, The man can perceive, that this ſurface is made up of ſix planes of the ſame figure and magnitude; the child cannot diſcover this. *Thirdly*, The man perceives, that each of theſe planes has four equal ſides, and four equal angles; and that the oppoſite ſides of each plane, and the oppoſite planes are parallel.

It will ſurely be allowed, that a man of ordinary judgment may obſerve all this in a cube which he makes an object of contemplation, and takes time to conſider; that he may give the name of a ſquare, to a plane terminated by four equal ſides and four equal angles; and the name of a cube, to a ſolid terminated by ſix equal ſquares; all this is nothing elſe but analyſing the figure of the object preſented to his ſenſes into its ſimpleſt elements, and again compounding it of thoſe elements.

By this analyſis and compoſition, two effects are produced. *Firſt*, From the one complex object which his ſenſes preſented, though one of the moſt ſimple the ſenſes can preſent, he educes many ſimple and diſtinct notions of right lines, angles, plain ſurface, ſolid, equality, parallelism; notions which the child has not yet faculties to attain. *Secondly*, When he conſiders the cube as compounded of theſe elements, put together in a certain order; he has then, and not before, a diſtinct and ſcientific notion of a cube. The child neither conceives thoſe elements, nor in what order they muſt be put together, in order to make a cube; and therefore has

has no accurate notion of a cube, which can make it a ſubject of reaſoning. CHAP. I.

Whence I think we may conclude, that the notion which we have from the ſenſes alone, even of the ſimpleſt objects of ſenſe, is indiſtinct and incapable of being either deſcribed or reaſoned upon, until it is analyſed into its ſimple elements, and conſidered as compounded of thoſe elements.

If we ſhould apply this reaſoning to more complex objects of ſenſe, the concluſion would be ſtill more evident. A dog may be taught to turn a jack, but he can never be taught to have a diſtinct notion of a jack. He ſees every part as well as a man; but the relation of the parts to one another, and to the whole, he has not judgment to comprehend.

A diſtinct notion of an object, even of ſenſe, is never got in an inſtant; but the ſenſe performs its office in an inſtant. Time is not required to ſee it better, but to analyſe it, to diſtinguiſh the different parts, and their relation to one another, and to the whole.

Hence it is, that when any vehement paſſion or emotion hinders the cool application of judgment, we get no diſtinct notion of an object, even though the ſenſe be long directed to it. A man who is put into a panic, by thinking he ſees a ghoſt, may ſtare at it long, without having any diſtinct notion of it; it is his underſtanding, and not his ſenſe that is diſturbed by his horror. If he can lay that aſide, judgment immediately enters upon its office, and examines the length and breadth, the colour, and figure, and diſtance of the object. Of theſe, while his panic laſted, he had no diſtinct notion, though his eyes were open all the time.

When the eye of ſenſe is open, but that of judgment ſhut by a panic, or any violent emotion that engroſſes the mind, we ſee things confuſedly, and probably much in the ſame manner that brutes and perfect idiots do, and infants before the uſe of judgment.

CHAP. I. There are therefore notions of the objects of ſenſe which are groſs and indiſtinct; and there are others that are diſtinct and ſcientific. The former may be got from the ſenſes alone; but the latter cannot be obtained without ſome degree of judgment.

The clear and accurate notions which geometry preſents to us of a point, a right line, an angle, a ſquare, a circle, of ratios direct and inverſe, and others of that kind, can find no admittance into a mind that has not ſome degree of judgment. They are not properly ideas of the ſenſes, nor are they got by compounding ideas of the ſenſes; but, by analyſing the ideas or notions we get by the ſenſes into their ſimpleſt elements, and again combining theſe elements into various, accurate, and elegant forms, which the ſenſes never did nor can exhibit.

Had Mr HUME attended duly to this, it ought to have prevented a very bold attempt, which he has proſecuted through fourteen pages of his Treatiſe of Human Nature, to prove that geometry is founded upon ideas that are not exact, and axioms that are not preciſely true.

A Mathematician might be tempted to think, that the man who ſeriouſly undertakes this has no great acquaintance with geometry; but I apprehend it is to be imputed to another cauſe, to a zeal for his own ſyſtem. We ſee that even men of genius may be drawn into ſtrange paradoxes, by an attachment to a favourite idol of the underſtanding, when it demands ſo coſtly a ſacrifice.

We Proteſtants think, that the devotees of the Roman church pay no ſmall tribute to her authority, when they renounce their five ſenſes in obedience to her decrees. Mr HUME's devotion to his ſyſtem carries him even to trample upon mathematical demonſtration.

The fundamental articles of his ſyſtem are, that all the perceptions of the human mind are either impreſſions or ideas; and that ideas

ideas are only faint copies of impreſſions. The idea of a right line, therefore, is only a faint copy of ſome line that has been ſeen, or felt by touch; and the faint copy cannot be more perfect than the original. Now of ſuch right lines, it is evident, that the axioms of geometry are not preciſely true; for two lines that are ſtraight to our ſight or touch may include a ſpace, or they may meet in more points than one. If therefore we cannot form any notion of a ſtraight line more accurate than that which we have from the ſenſes of ſight and touch, geometry has no ſolid foundation. If, on the other hand, the geometrical axioms are preciſely true, the idea of a right line is not copied from any impreſſion of ſight or touch, but muſt have a different origin, and a more perfect ſtandard.

As the Geometrician, by reflecting only upon the extenſion and figure of matter, forms a ſet of notions more accurate and ſcientific than any which the ſenſes exhibit; ſo the natural Philoſopher, reflecting upon other attributes of matter, forms another ſet, ſuch as thoſe of denſity, quantity of matter, velocity, momentum, fluidity, elaſticity, centres of gravity, and of oſcillation. Theſe notions are accurate and ſcientific; but they cannot enter into a mind that has not ſome degree of judgment, nor can we make them intelligible to children, until they have ſome ripeneſs of underſtanding.

In navigation, the notions of latitude, longitude, courſe, leeway, cannot be made intelligible to children; and ſo it is with regard to the terms of every ſcience, and of every art about which we can reaſon. They have had their five ſenſes as perfect as men, for years before they are capable of diſtinguiſhing, comparing, and perceiving the relations of things, ſo as to be able to form ſuch notions. They acquire the intellectual powers by a ſlow progreſs, and by imperceptible degrees, and by means of them learn to form diſtinct and accurate notions of things, which the ſenſes could never have imparted.

Having ſaid ſo much of the notions we get from the ſenſes alone

CHAP. I. of the objects of ſenſe, let us next conſider what notions we can have from conſciouſneſs alone of the operations of our minds.

Mr LOCKE very properly calls conſciouſneſs an internal ſenſe. It gives the like immediate knowledge of things in the mind, that is, of our own thoughts and feelings, as the ſenſes give us of things external. There is this difference, however, that an external object may be at reſt, and the ſenſe may be employed about it for ſome time. But the objects of conſciouſneſs are never at reſt; the ſtream of thought flows like a river, without ſtopping a moment; the whole train of thought paſſes in ſucceſſion under the eye of conſciouſneſs, which is always employed about the preſent. But is it conſciouſneſs that analyſes complex operations, diſtinguiſhes their different ingredients, and combines them in diſtinct parcels under general names? This ſurely is not the work of conſciouſneſs, nor can it be performed without reflection, recollecting and judging of what we were conſcious of, and diſtinctly remember. This reflection does not appear in children. Of all the powers of the mind, it ſeems to be of the lateſt growth, whereas conſciouſneſs is coeval with the earlieſt.

Conſciouſneſs, being a kind of internal ſenſe, can no more give us diſtinct and accurate notions of the operations of our minds, than the external ſenſes can give of external objects. Reflection upon the operations of our minds is the ſame kind of operation with that by which we form diſtinct notions of external objects. They differ not in their nature, but in this only, that one is employed about external, and the other about internal objects; and both may, with equal propriety, be called reflection.

Mr LOCKE has reſtricted the word reflection to that which is employed about the operations of our minds, without any authority, as I think, from cuſtom, the arbiter of language: For ſurely I may reflect upon what I have ſeen or heard, as well as upon what I have thought. The word, in its proper and common meaning, is equally

equally applicable to objects of ſenſe, and to objects of conſciouſneſs. He has likewiſe confounded reflection with conſciouſneſs, and ſeems not to have been aware that they are different powers, and appear at very different periods of life.

If that eminent Philoſopher had been aware of theſe miſtakes about the meaning of the word reflection, he would, I think, have ſeen, that as it is by reflection upon the operations of our own minds that we can form any diſtinct and accurate notions of them, and not by conſciouſneſs without reflection; ſo it is by reflection upon the objects of ſenſe, and not by the ſenſes without reflection, that we can form diſtinct notions of them. Reflection upon any thing, whether external or internal, makes it an object of our intellectual powers, by which we ſurvey it on all ſides, and form ſuch judgments about it as appear to be juſt and true.

I propoſed, in the *third* place, to conſider our notions of the relations of things: And here I think, that, without judgment, we cannot have any notion of relations.

There are two ways in which we get the notion of relations. The firſt is, by comparing the related objects, when we have before had the conception of both. By this compariſon, we perceive the relation, either immediately, or by a proceſs of reaſoning. That my foot is longer than my finger, I perceive immediately; and that three is the half of ſix. This immediate perception is immediate and intuitive judgment. That the angles at the baſe of an iſoſceles triangle are equal, I perceive by a proceſs of reaſoning, in which it will be acknowledged there is judgment.

Another way in which we get the notion of relations (which ſeems not to have occurred to Mr LOCKE) is, when, by attention to one of the related objects, we perceive or judge, that it muſt, from its nature, have a certain relation to ſomething elſe, which before perhaps we never thought of; and thus our attention to one

CHAP. I. one of the related objects produces the notion of a correlate, and of a certain relation between them.

Thus, when I attend to colour, figure, weight, I cannot help judging theſe to be qualities which cannot exiſt without a ſubject; that is, ſomething which is coloured, figured, heavy. If I had not perceived ſuch things to be qualities, I ſhould never have had any notion of their ſubject, or of their relation to it.

By attending to the operations of thinking, memory, reaſoning, we perceive or judge, that there muſt be ſomething which thinks, remembers, and reaſons, which we call the mind. When we attend to any change that happens in Nature, judgment informs us, that there muſt be a cauſe of this change, which had power to produce it; and thus we get the notions of cauſe and effect, and of the relation between them. When we attend to body, we perceive that it cannot exiſt without ſpace; hence we get the notion of ſpace, (which is neither an object of ſenſe nor of conſciouſneſs), and of the relation which bodies have to a certain portion of unlimited ſpace, as their place.

I apprehend, therefore, that all our notions of relations may more properly be aſcribed to judgment as their ſource and origin, than to any other power of the mind. We muſt firſt perceive relations by our judgment, before we can conceive them without judging of them; as we muſt firſt perceive colours by ſight, before we can conceive them without ſeeing them. I think Mr LOCKE, when he comes to ſpeak of the ideas of relations, does not ſay that they are ideas of ſenſation or reflection, but only that they terminate in and are concerned about ideas of ſenſation or reflection.

The notions of unity and number are ſo abſtract, that it is impoſſible they ſhould enter into the mind until it has ſome degree of judgment. We ſee with what difficulty, and how ſlowly, children

dren learn to uſe, with underſtanding, the names even of ſmall numbers, and how they exult in this acquiſition when they have attained it. Every number is conceived by the relation which it bears to unity, or to known combinations of units; and upon that account, as well as on account of its abſtract nature, all diſtinct notions of it require ſome degree of judgment.

In its proper place, I ſhall have occaſion to ſhow, that judgment is an ingredient in all determinations of taſte; in all moral determinations; and in many of our paſſions and affections. So that this operation, after we come to have any exerciſe of judgment, mixes with moſt of the operations of our minds, and, in analyſing them, cannot be overlooked without confuſion and error.

CHAP. II.

Of Common Senſe.

THE word *ſenſe*, in common language, ſeems to have a different meaning from that which it has in the writings of Philoſophers; and thoſe different meanings are apt to be confounded, and to occaſion embarraſſment and error.

Not to go back to ancient philoſophy upon this point, modern Philoſophers conſider ſenſe as a power that has nothing to do with judgment. Senſe they conſider as the power by which we receive certain ideas or impreſſions from objects; and judgment as the power by which we compare thoſe ideas, and perceive their neceſſary agreements and diſagreements.

The external ſenſes give us the idea of colour, figure, ſound, and other qualities of body, primary or ſecondary. Mr LOCKE gave the name of an internal ſenſe to conſciouſneſs, becauſe by it we have

CHAP. II. have the ideas of thought, memory, reaſoning, and other operations of our own minds. Dr HUTCHESON of Glaſgow, conceiving that we have ſimple and original ideas which cannot be imputed either to the external ſenſes, or to conſciouſneſs, introduced other internal ſenſes; ſuch as the ſenſe of harmony, the ſenſe of beauty, and the moral ſenſe. Ancient Philoſophers alſo ſpake of internal ſenſes, of which memory was accounted one.

But all theſe ſenſes, whether external or internal, have been repreſented by Philoſophers, as the means of furniſhing our minds with ideas, without including any kind of judgment. Dr HUTCHESON defines a ſenſe to be a determination of the mind to receive any idea from the preſence of an object independent on our will.

" By this term (ſenſe) Philoſophers in general have denominated " thoſe faculties, in conſequence of which we are liable to feelings " relative to ourſelves only, and from which they have not pre- " tended to draw any concluſions concerning the nature of things; " whereas truth is not relative, but abſolute and real. Dr PRIEST- LY's Exam. of Dr REID, *&c.* page 123.

On the contrary, in common language, ſenſe always implies judgment. A man of ſenſe is a man of judgment. Good ſenſe is good judgment. Nonſenſe is what is evidently contrary to right judgment. Common ſenſe is that degree of judgment which is common to men with whom we can converſe and tranſact buſineſs.

Seeing and hearing by Philoſophers are called ſenſes, becauſe we have ideas by them; by the vulgar they are called ſenſes, becauſe we judge by them. We judge of colours by the eye; of ſounds by the ear; of beauty and deformity by taſte; of right and wrong in conduct, by our moral ſenſe or conſcience.

Sometimes Philoſophers, who repreſent it as the ſole province of ſenſe to furniſh us with ideas, fall unawares into the popular opinion,

nion, that they are judging faculties. Thus LOCKE, book 4. chap. 11. "And of this, (that the quality or accident of colour "doth really exiſt, and hath a being without me,) the greateſt "aſſurance I can poſſibly have, and to which my faculties can at- "tain, is the teſtimony of my eyes, which are the proper and ſole "judges of this thing." CHAP. II.

This popular meaning of the word *ſenſe* is not peculiar to the Engliſh language. The correſponding words in Greek, Latin, and I believe in all the European languages, have the ſame latitude. The Latin words *ſentire*, *ſententia*, *ſenſa*, *ſenſus*, from the laſt of which the Engliſh word *ſenſe* is borrowed, expreſs judgment or opinion, and are applied indifferently to objects of external ſenſe, of taſte, of morals, and of the underſtanding.

I cannot pretend to aſſign the reaſon why a word, which is no term of art, which is familiar in common converſation, ſhould have ſo different a meaning in philoſophical writings. I ſhall only obſerve, that the philoſophical meaning correſponds perfectly with the account which Mr LOCKE and other modern Philoſophers give of judgment. For if the ſole province of the ſenſes, external and internal, be to furniſh the mind with the ideas about which we judge and reaſon, it ſeems to be a natural conſequence, that the ſole province of judgment ſhould be to compare thoſe ideas, and to perceive their neceſſary relations.

Theſe two opinions ſeem to be ſo connected, that one may have been the cauſe of the other. I apprehend, however, that if both be true, there is no room left for any knowledge or judgment, either of the real exiſtence of contingent things, or of their contingent relations.

To return to the popular meaning of the word ſenſe. I believe it would be much more difficult to find good authors who never uſe it in that meaning, than to find ſuch as do.

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We may take Mr POPE as good authority for the meaning of an Engliſh word. He uſes it often, and in his Epiſtle to the Earl of BURLINGTON, has made a little deſcant upon it.

" Oft have you hinted to your brother Peer,
" A certain truth, which many buy too dear;
" Something there is more needful than expence,
" And ſomething previous ev'n to taſte,—'tis ſenſe.
" Good ſenſe, which only is the gift of Heaven;
" And though no ſcience, fairly worth the ſeven;
" A light, which in yourſelf you muſt perceive,
" JONES and LE NÔTRE have it not to give."

This inward light or ſenſe is given by Heaven to different perſons in different degrees. There is a certain degree of it which is neceſſary to our being ſubjects of law and government, capable of managing our own affairs, and anſwerable for our conduct towards others: This is called common ſenſe, becauſe it is common to all men with whom we can tranſact buſineſs, or call to account for their conduct.

The laws of all civiliſed nations diſtinguiſh thoſe who have this gift of Heaven, from thoſe who have it not. The laſt may have rights which ought not to be violated, but having no underſtanding in themſelves to direct their actions, the laws appoint them to be guided by the underſtanding of others. It is eaſily diſcerned by its effects in mens actions, in their ſpeeches, and even in their looks; and when it is made a queſtion, whether a man has this natural gift or not, a judge or a jury, upon a ſhort converſation with him, can, for the moſt part, determine the queſtion with great aſſurance.

The ſame degree of underſtanding which makes a man capable of acting with common prudence in the conduct of life, makes him capable of diſcovering what is true and what is falſe in matters that are ſelf-evident, and which he diſtinctly apprehends.

All

All knowledge, and all ſcience, muſt be built upon principles that are ſelf-evident; and of ſuch principles, every man who has common ſenſe is a competent judge, when he conceives them diſtinctly. Hence it is, that diſputes very often terminate in an appeal to common ſenſe.

While the parties agree in the firſt principles on which their arguments are grounded, there is room for reaſoning; but when one denies what to the other appears too evident to need, or to admit of proof, reaſoning ſeems to be at an end; an appeal is made to common ſenſe, and each party is left to enjoy his own opinion.

There ſeems to be no remedy for this, nor any way left to diſcuſs ſuch appeals, unleſs the deciſions of common ſenſe can be brought into a code, in which all reaſonable men ſhall acquieſce. This indeed, if it be poſſible, would be very deſirable, and would ſupply a deſideratum in logic; and why ſhould it be thought impoſſible that reaſonable men ſhould agree in things that are ſelf-evident?

All that is intended in this chapter, is to explain the meaning of common ſenſe, that it may not be treated, as it has been by ſome, as a new principle, or as a word without any meaning. I have endeavoured to ſhew, that ſenſe, in its moſt common, and therefore its moſt proper meaning, ſignifies judgment, though Philoſophers often uſe it in another meaning. From this it is natural to think, that common ſenſe ſhould mean common judgment; and ſo it really does.

What the preciſe limits are which divide common judgment from what is beyond it on the one hand, and from what falls ſhort of it on the other, may be difficult to determine; and men may agree in the meaning of the word who have different opinions about thoſe limits, or who even never thought of fixing them. This is as intelligible as, that all Engliſhmen ſhould mean the ſame thing

CHAP. II. by the county of York, though perhaps not a hundredth part of them can point out its preciſe limits.

Indeed, it ſeems to me, that common ſenſe is as unambiguous a word, and as well underſtood as the county of York. We find it in innumerable places in good writers; we hear it on innumerable occaſions in converſation; and, as far as I am able to judge, always in the ſame meaning. And this is probably the reaſon why it is ſo ſeldom defined or explained.

Dr JOHNSON, in the authorities he gives, to ſhew that the word *ſenſe* ſignifies underſtanding, ſoundneſs of faculties, ſtrength of natural reaſon, quotes Dr BENTLEY for what may be called a definition of common ſenſe, though probably not intended for that purpoſe, but mentioned accidentally: "God hath endowed mankind with power and abilities, which we call natural light and reaſon, and common ſenſe."

It is true, that common ſenſe is a popular, and not a ſcholaſtic word; and by moſt of thoſe who have treated ſyſtematically of the powers of the underſtanding, it is only occaſionally mentioned, as it is by other writers. But I recollect two philoſophical writers, who are exceptions to this remark. One is BUFFIER, who treated largely of common ſenſe, as a principle of knowledge, above fifty years ago. The other is Biſhop BERKELEY, who, I think, has laid as much ſtreſs upon common ſenſe, in oppoſition to the doctrines of Philoſophers, as any Philoſopher that has come after him. If the reader chuſes to look back to Eſſay II. chap. 10. he will be ſatisfied of this, from the quotations there made for another purpoſe, which it is unneceſſary here to repeat.

Men rarely aſk what common ſenſe is; becauſe every man believes himſelf poſſeſſed of it, and would take it for an imputation upon his underſtanding to be thought unacquainted with it. Yet I remember two very eminent authors who have put this queſtion; and

and it is not improper to hear their ſentiments upon a ſubject ſo frequently mentioned, and ſo rarely canvaſſed.

It is well known, that Lord SHAFTESBURY gave to one of his Treatiſes the title of *Senſus Communis; an Eſſay on the freedom of wit and humour, in a letter to a friend;* in which he puts his friend in mind of a free converſation with ſome of their friends on the ſubjects of morality and religion. Amidſt the different opinions ſtarted and maintained with great life and ingenuity, one or other would every now and then take the liberty to appeal to common ſenſe. Every one allowed the appeal; no one would offer to call the authority of the court in queſtion, till a gentleman, whoſe good underſtanding was never yet brought in doubt, deſired the company very gravely that they would tell him what common ſenſe was.

" If, ſaid he, by the word *ſenſe*, we were to underſtand opinion " and judgment, and by the word *common*, the generality, or any " conſiderable part of mankind, it would be hard to diſcover where " the ſubject of common ſenſe could lie; for that which was ac- " cording to the ſenſe of one part of mankind, was againſt the " ſenſe of another: And if the majority were to determine common " ſenſe, it would change as often as men changed. That in religion, " common ſenſe was as hard to determine as *catholic* or *orthodox*. " What to one was abſurdity, to another was demonſtration.

" In policy, if plain Britiſh or Dutch ſenſe were right, Turkiſh " and French muſt certainly be wrong. And as mere nonſenſe, " as paſſive obedience ſeemed, we found it to be the common ſenſe " of a great party amongſt ourſelves, a greater party in Europe, " and perhaps the greateſt part of all the world beſides. As for " morals, the difference was ſtill wider; for even the Philoſo- " phers could never agree in one and the ſame ſyſtem. And ſome " even of our moſt admired modern Philoſophers had fairly told " us, that virtue and vice had no other law or meaſure than mere " faſhion and vogue."

This

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This is the ſubſtance of the gentleman's ſpeech, which, I apprehend, explains the meaning of the word perfectly, and contains all that has been ſaid, or can be ſaid againſt the authority of common ſenſe, and the propriety of appeals to it.

As there is no mention of any anſwer immediately made to this ſpeech, we might be apt to conclude, that the noble author adopted the ſentiments of the intelligent gentleman, whoſe ſpeech he recites. But the contrary is manifeſt, from the title of *Senſus Communis* given to his Eſſay, from his frequent uſe of the word, and from the whole tenor of the Eſſay.

The author appears to have a double intention in that Eſſay, correſponding to the double title prefixed to it. One intention is, to juſtify the uſe of wit, humour, and ridicule, in diſcuſſing among friends the graveſt ſubjects. "I can very well ſuppoſe, "ſays he, men may be frighted out of their wits; but I have no "apprehenſion they ſhould be laughed out of them. I can hardly "imagine, that, in a pleaſant way, they ſhould ever be talked out "of their love for ſociety, or reaſoned out of humanity and com-"mon ſenſe."

The other intention, ſignified by the title *Senſus Communis*, is carried on hand in hand with the firſt, and is to ſhew, that common ſenſe is not ſo vague and uncertain a thing as it is repreſented to be in the ſceptical ſpeech before recited. "I will try," ſays he, "what certain knowledge or aſſurance of things may be recovered "in that very way, (to wit, of humour,) by which all certainty, "you thought, was loſt, and an endleſs ſcepticiſm introduced."

He gives ſome criticiſms upon the word *ſenſus communis* in JUVENAL, HORACE, and SENECA; and after ſhewing, in a facetious way throughout the Treatiſe, that the fundamental principles of morals, of politics, of criticiſm, and of every branch of knowledge, are the dictates of common ſenſe, he ſums up the whole in

in theſe words: " That ſome moral and philoſophical truths " there are ſo evident in themſelves, that it would be eaſier to ima- " gine half mankind run mad, and joined preciſely in the ſame " ſpecies of folly, than to admit any thing as truth, which ſhould " be advanced againſt ſuch natural knowledge, fundamental rea- " ſon, and common ſenſe." And, on taking leave, he adds: " And now, my friend, ſhould you find I had moraliſed in any " tolerable manner, according to common ſenſe, and without " canting, I ſhould be ſatisfied with my performance."

Another eminent writer who has put the queſtion what common ſenſe is, is FENELON, the famous Archbiſhop of Cambray.

That ingenious and pious author, having had an early prepoſſeſſion in favour of the Carteſian philoſophy, made an attempt to eſtabliſh, on a ſure foundation, the metaphyſical arguments which DES CARTES had invented to prove the being of the Deity. For this purpoſe, he begins with the Carteſian doubt. He proceeds to find out the truth of his own exiſtence, and then to examine wherein the evidence and certainty of this and other ſuch primary truths conſiſted. This, according to Carteſian principles, he places in the clearneſs and diſtinctneſs of the ideas. On the contrary, he places the abſurdity of the contrary propoſitions, in their being repugnant to his clear and diſtinct ideas.

To illuſtrate this, he gives various examples of queſtions manifeſtly abſurd and ridiculous, which every man of common underſtanding would at firſt ſight perceive to be ſo, and then goes on to this purpoſe.

" What is it that makes theſe queſtions ridiculous? Wherein " does this ridicule preciſely conſiſt? It will perhaps be replied, " that it conſiſts in this, that they ſhock common ſenſe. But " what is this ſame common ſenſe? It is not the firſt notions that " all men have equally of the ſame things. This common ſenſe,

" which

CHAP. II. " which is always and in all places the ſame; which prevents en-
" quiry; which makes enquiry in ſome caſes ridiculous; which,
" inſtead of enquiring, makes a man laugh whether he will or
" not; which puts it out of a man's power to doubt; this ſenſe,
" which only waits to be conſulted; which ſhows itſelf at the
" firſt glance, and immediately diſcovers the evidence or the ab-
" ſurdity of a queſtion; is not this the ſame that I call my ideas?

" Behold then thoſe ideas or general notions, which it is not
" in my power either to contradict or examine, and by which I
" examine and decide in every caſe, inſomuch that I laugh inſtead
" of anſwering, as often as any thing is propoſed to me, which
" is evidently contrary to what theſe immutable ideas repreſent."

I ſhall only obſerve upon this paſſage, that the interpretation it gives of DES CARTES criterion of truth, whether juſt or not, is the moſt intelligible and the moſt favourable I have met with.

I beg leave to mention one paſſage from CICERO, and to add two or three from late writers, which ſhow that this word is not become obſolete, nor has changed its meaning.

De Oratore, lib. 3. " Omnes enim tacito quodam ſenſu, ſine
" ulla arte aut ratione, in artibus ac rationibus, recta ac prava
" dijudicant. Idque cum faciant in picturis, et in ſignis, et in
" aliis operibus, ad quorum intelligentiam a natura minus habent
" inſtrumenti, tum multo oſtendunt magis in verborum, nume-
" rorum, vocumque judicio; quod ea ſint in communibus in-
" fixa ſenſibus; neque earum rerum quemquam funditus natura
" voluit expertem."

HUME's Eſſays and Treatiſes, vol. 1. p. 5. " But a Philoſopher
" who propoſes only to repreſent the common ſenſe of mankind
" in more beautiful and more engaging colours, if by accident he
" commits a miſtake, goes no farther, but renewing his appeal
" to

" to common ſenſe, and the natural ſentiments of the mind, re-
" turns into the right path, and ſecures himſelf from any dan-
" gerous illuſion."

HUME's Enquiry concerning the Principles of Morals, p. 2. " Thoſe who have refuſed the reality of moral diſtinctions may " be ranked among the diſingenuous diſputants. The only way " of converting an antagoniſt of this kind is to leave him to him-" ſelf: For, finding that nobody keeps up the controverſy with " him, 'tis probable he will at laſt, of himſelf, from mere weari-" neſs, come over to the ſide of common ſenſe and reaſon."

PRIESTLY's Inſtitutes, Prelim. Eſſay, vol. 1. p. 27. " Becauſe " common ſenſe is a ſufficient guard againſt many errors in reli-" gion, it ſeems to have been taken for granted, that that com-" mon ſenſe is a ſufficient inſtructor alſo, whereas in fact, with-" out poſitive inſtruction, men would naturally have been mere " ſavages with reſpect to religion; as, without ſimilar inſtruction, " they would be ſavages with reſpect to the arts of life and the " ſciences. Common ſenſe can only be compared to a judge; " but what can a judge do without evidence and proper materials " from which to form a judgment?"

PRIESTLY's Examination of Dr REID, *&c.* page 127. " But " ſhould we, out of complaiſance, admit that what has hitherto " been called judgment may be called ſenſe, it is making too free " with the eſtabliſhed ſignification of words to call it common " ſenſe, which, in common acceptation, has long been appropri-" ated to a very different thing, *viz.* To that capacity for judging " of common things that perſons of middling capacities are ca-" pable of." Page 129. " I ſhould therefore expect, that if a " man was ſo totally deprived of common ſenſe as not to be able " to diſtinguiſh truth from falſehood in one caſe, he would be " equally incapable of diſtinguiſhing it in another."

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From this cloud of teſtimonies, to which hundreds might be added, I apprehend, that whatever cenſure is thrown upon thoſe who have ſpoke of common ſenſe as a principle of knowledge, or who have appealed to it in matters that are ſelf-evident, will fall light, when there are ſo many to ſhare in it. Indeed, the authority of this tribunal is too ſacred and venerable, and has preſcription too long in its favour to be now *wiſely* called in queſtion. Thoſe who are diſpoſed to do ſo, may remember the ſhrewd ſaying of Mr HOBBES, "When reaſon is againſt a man, a man will "be againſt reaſon." This is equally applicable to common ſenſe.

From the account I have given of the meaning of this term, it is eaſy to judge both of the proper uſe and of the abuſe of it.

It is abſurd to conceive that there can be any oppoſition between reaſon and common ſenſe. It is indeed the firſt-born of reaſon, and as they are commonly joined together in ſpeech and in writing, they are inſeparable in their nature.

We aſcribe to reaſon two offices, or two degrees. The firſt is to judge of things ſelf-evident; the ſecond to draw concluſions that are not ſelf-evident from thoſe that are. The firſt of theſe is the province, and the ſole province of common ſenſe; and therefore it coincides with reaſon in its whole extent, and is only another name for one branch or one degree of reaſon. Perhaps it may be ſaid, Why then ſhould you give it a particular name, ſince it is acknowledged to be only a degree of reaſon? It would be a ſufficient anſwer to this, Why do you aboliſh a name which is to be found in the language of all civilized nations, and has acquired a right by preſcription? Such an attempt is equally fooliſh and ineffectual. Every wiſe man will be apt to think, that a name which is found in all languages as far back as we can trace them, is not without ſome uſe.

But there is an obvious reaſon why this degree of reaſon ſhould have

have a name appropriated to it; and that is, that in the greateſt part of mankind no other degree of reaſon is to be found. It is this degree that entitles them to the denomination of reaſonable creatures. It is this degree of reaſon, and this only, that makes a man capable of managing his own affairs, and anſwerable for his conduct towards others. There is therefore the beſt reaſon why it ſhould have a name appropriated to it.

Theſe two degrees of reaſon differ in other reſpects, which would be ſufficient to entitle them to diſtinct names.

The firſt is purely the gift of Heaven. And where Heaven has not given it, no education can ſupply the want. The ſecond is learned by practice and rules, when the firſt is not wanting. A man who has common ſenſe may be taught to reaſon. But if he has not that gift, no teaching will make him able either to judge of firſt principles or to reaſon from them.

I have only this farther to obſerve, that the province of common ſenſe is more extenſive in refutation than in confirmation. A concluſion drawn by a train of juſt reaſoning from true principles cannot poſſibly contradict any deciſion of common ſenſe, becauſe truth will always be conſiſtent with itſelf. Neither can ſuch a concluſion receive any confirmation from common ſenſe, becauſe it is not within its juriſdiction.

But it is poſſible, that, by ſetting out from falſe principles, or by an error in reaſoning, a man may be led to a concluſion that contradicts the deciſions of common ſenſe. In this caſe, the concluſion is within the juriſdiction of common ſenſe, though the reaſoning on which it was grounded be not; and a man of common ſenſe may fairly reject the concluſion, without being able to ſhew the error of the reaſoning that led to it.

Thus, if a Mathematician, by a proceſs of intricate demonſtra-

CHAP. II. tion, in which ſome falſe ſtep was made, ſhould be brought to this concluſion, that two quantities, which are both equal to a third, are not equal to each other, a man of common ſenſe, without pretending to be a judge of the demonſtration, is well entitled to reject the concluſion, and to pronounce it abſurd.

CHAP. III.

Sentiments of Philoſophers concerning Judgment.

A DIFFERENCE about the meaning of a word ought not to occaſion diſputes among Philoſophers: But it is often very proper to take notice of ſuch differences, in order to prevent verbal diſputes. There are, indeed, no words in language more liable to ambiguity than thoſe by which we expreſs the operations of the mind; and the moſt candid and judicious may ſometimes be led into different opinions about their preciſe meaning.

I hinted before what I take to be a peculiarity in Mr LOCKE with regard to the meaning of the word judgment, and mentioned what I apprehend may have led him into it. But let us hear himſelf; Eſſay, book 4. chap. 14. "The faculty which God has "given to man to ſupply the want of clear and certain knowledge, "where that cannot be had, is judgment; whereby the mind takes "its ideas to agree or diſagree; or, which is the ſame, any pro- "poſition to be true or falſe, without perceiving a demonſtrative "evidence in the proofs. Thus the mind has two faculties, con- "verſant about truth and falſehood. *Firſt*, Knowledge, whereby "it certainly perceives, and is undoubtedly ſatisfied of the agree- "ment or diſagreement of any ideas. *Secondly*, Judgment, which "is the putting ideas together, or ſeparating them from one an- "other

" other in the mind, when their certain agreement or diſagreement CHAP. III.
" is not perceived, but preſumed to be ſo."

Knowledge, I think, ſometimes ſignifies things known; ſometimes that act of the mind by which we know them. And in like manner opinion ſometimes ſignifies things believed; ſometimes the act of the mind by which we believe them. But judgment is the faculty which is exerciſed in both theſe acts of the mind. In knowledge, we judge without doubting; in opinion, with ſome mixture of doubt. But I know no authority, beſides that of Mr LOCKE, for calling knowledge a faculty, any more than for calling opinion a faculty.

Neither do I think that knowledge is confined within the narrow limits which Mr LOCKE aſſigns to it; becauſe the far greateſt part of what all men call human knowledge, is in things which neither admit of intuitive nor of demonſtrative proof.

I have all along uſed the word *judgment* in a more extended ſenſe than Mr LOCKE does in the paſſage above mentioned. I underſtand by it that operation of mind, by which we determine, concerning any thing that may be expreſſed by a propoſition, whether it be true or falſe. Every propoſition is either true or falſe; ſo is every judgment. A propoſition may be ſimply conceived without judging of it. But when there is not only a conception of the propoſition, but a mental affirmation or negation, an aſſent or diſſent of the underſtanding, whether weak or ſtrong, that is judgment.

I think, that ſince the days of ARISTOTLE, Logicians have taken the word in that ſenſe, and other writers, for the moſt part, though there are other meanings, which there is no danger of confounding with this.

We may take the authority of Dr ISAAC WATTS, as a Logician, as a man who underſtood Engliſh, and who had a juſt eſteem

of

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of Mr LOCKE's Eſſay. Logic. Introd. page 5. " Judgment is " that operation of the mind, wherein we join two or more ideas " together by one affirmation or negation; that is, we either affirm " or deny *this* to be *that*. *So this tree is high; that horſe is not ſwift; " the mind of man is a thinking being; mere matter has no thought be- " longing to it; God is juſt; good men are often miſerable in this world; " a righteous governor will make a difference betwixt the evil and the " good;* which ſentences are the effect of judgment, and are called " propoſitions." And part 2. chap. 2. ſect. 9. " The evidence of " ſenſe is, when we frame a propoſition according to the dictate " of any of our ſenſes. So we judge, *that graſs is green; that a " trumpet gives a pleaſant ſound; that fire burns wood; water is ſoft; " and iron hard.*"

In this meaning, judgment extends to every kind of evidence, probable or certain, and to every degree of aſſent or diſſent. It extends to all knowledge as well as to all opinion; with this difference only, that in knowledge it is more firm and ſteady, like a houſe founded upon a rock. In opinion it ſtands upon a weaker foundation, and is more liable to be ſhaken and overturned.

Theſe differences about the meaning of words are not mentioned as if truth was on one ſide, and error on the other, but as an apology for deviating in this inſtance from the phraſeology of Mr LOCKE, which is for the moſt part accurate and diſtinct; and becauſe attention to the different meanings that are put upon words by different authors is the beſt way to prevent our miſtaking verbal differences for real differences of opinion.

The common theory concerning ideas naturally leads to a theory concerning judgment, which may be a proper teſt of its truth; for as they are neceſſarily connected, they muſt ſtand or fall together: Their connection is thus expreſſed by Mr LOCKE, book 4. chap. 1. " Since the mind, in all its thoughts and reaſonings, hath " no other immediate object but its own ideas, which it alone

" does,

" does, or can contemplate, it is evident that our knowledge is on-
" ly converſant about them. Knowledge then ſeems to me to
" be nothing but the *perception of the connection, and agreement or*
" *diſagreement and repugnancy of any of our ideas. In this alone it*
" *conſiſts.*"

There can only be one objection to the juſtice of this inference; and that is, that the antecedent propoſition from which it is inferred, ſeems to have ſome ambiguity: For, in the firſt clauſe of that propoſition, the mind is ſaid to have no other *immediate* object but its own ideas; in the ſecond, that it has no other object at all; that it does or can contemplate ideas alone.

If the word *immediate* in the firſt clauſe be a mere expletive, and be not intended to limit the generality of the propoſition, then the two clauſes will be perfectly conſiſtent, the ſecond being only a repetition or explication of the firſt; and the inference that our knowledge is only converſant about ideas, will be perfectly juſt and logical.

But if the word *immediate* in the firſt clauſe be intended to limit the general propoſition, and to imply, that the mind has other objects beſides its own ideas, though no other immediate objects; then it will not be true that it does or can contemplate ideas alone; nor will the inference be juſtly drawn, that our knowledge is only converſant about ideas.

Mr LOCKE muſt either have meant his antecedent propoſition, without any limitation by the word *immediate*, or he muſt have meant to limit it by that word, and to ſignify that there are objects of the mind which are not ideas.

The firſt of theſe ſuppoſitions appears to me moſt probable, for ſeveral reaſons.

Firſt,

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Firſt, Becauſe, when he purpoſely defines the word *idea*, in the introduction to the Eſſay, he ſays it is whatſoever is the object of the underſtanding when a man thinks; or whatever the mind can be employed about in thinking. Here there is no room left for objects of the mind that are not ideas. The ſame definition is often repeated throughout the Eſſay. Sometimes, indeed, the word *immediate* is added, as in the paſſage now under conſideration; but there is no intimation made that it ought to be underſtood when it is not expreſſed. Now if it had really been his opinion, that there are objects of thought which are not ideas, this definition, which is the ground work of the whole Eſſay, would have been very improper, and apt to miſlead his reader.

Secondly, He has never attempted to ſhow how there can be objects of thought, which are not immediate objects; and indeed this ſeems impoſſible. For whatever the object be, the man either thinks of it, or he does not. There is no medium between theſe. If he thinks of it, it is an immediate object of thought while he thinks of it. If he does not think of it, it is no object of thought at all. Every object of thought, therefore, is an immediate object of thought, and the word *immediate*, joined to objects of thought, ſeems to be a mere expletive.

Thirdly, Though MALEBRANCHE and Biſhop BERKELEY believed, that we have no ideas of minds, or of the operations of minds, and that we may think and reaſon about them without ideas, this was not the opinion of Mr LOCKE. He thought that there are ideas of minds, and of their operations, as well as of the objects of ſenſe; that the mind perceives nothing but its own ideas, and that all words are the ſigns of ideas.

A *fourth* reaſon is, That to ſuppoſe that he intended to limit the antecedent propoſition by the word *immediate*, is to impute to him a blunder in reaſoning, which I do not think Mr LOCKE could have committed; for what can be a more glaring paralogiſm than

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to infer, that ſince ideas are partly, though not ſolely, the objects of thought, it is evident that all our knowledge is only converſant about them. If, on the contrary, he meant that ideas are the only objects of thought, then the concluſion drawn is perfectly juſt and obvious; and he might very well ſay, *that ſince it is ideas only that the mind does or can contemplate, it is evident that our knowledge is only converſant about them.*

As to the concluſion itſelf, I have only to obſerve, that though he extends it only to what he calls knowledge, and not to what he calls judgment, there is the ſame reaſon for extending it to both.

It is true of judgment, as well as of knowledge, that it can only be converſant about objects of the mind, or about things which the mind can contemplate. Judgment, as well as knowledge, ſuppoſes the conception of the object about which we judge; and to judge of objects that never were nor can be objects of the mind, is evidently impoſſible.

This therefore we may take for granted, that if knowledge be converſant about ideas only, becauſe there is no other object of the mind, it muſt be no leſs certain, that judgment is converſant about ideas only, for the ſame reaſon.

Mr LOCKE adds, as the reſult of his reaſoning, Knowledge then ſeems to me to be nothing but the perception of the connection and agreement, or diſagreement and repugnancy, of any of our ideas. In this alone it conſiſts.

This is a very important point, not only on its own account, but on account of its neceſſary connection with his ſyſtem concerning ideas, which is ſuch, as that both muſt ſtand or fall together; for if there is any part of human knowledge which does not conſiſt in the perception of the agreement or diſagreement of ideas, it muſt follow, that there are objects of thought and of contemplation which are not ideas.

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This point, therefore, deſerves to be carefully examined. With this view, let us firſt attend to its meaning, which I think can hardly be miſtaken, though it may need ſome explication.

Every point of knowledge, and every judgment, is expreſſed by a propoſition, wherein ſomething is affirmed or denied of the ſubject of the propoſition.

By perceiving the connection or agreement of two ideas, I conceive is meant perceiving the truth of an affirmative propoſition, of which the ſubject and predicate are ideas. In like manner, by perceiving the diſagreement and repugnancy of any two ideas, I conceive is meant perceiving the truth of a negative propoſition, of which both ſubject and predicate are ideas. This I take to be the only meaning the words can bear, and it is confirmed by what Mr LOCKE ſays in a paſſage already quoted in this chapter, that "the mind, taking its ideas to agree or diſagree, is the ſame as "taking any propoſition to be true or falſe." Therefore, if the definition of knowledge given by Mr LOCKE be a juſt one, the ſubject, as well as the predicate of every propoſition, by which any point of knowledge is expreſſed, muſt be an idea, and can be nothing elſe; and the ſame muſt hold of every propoſition by which judgment is expreſſed, as has been ſhown above.

Having aſcertained the meaning of this definition of human knowledge, we are next to conſider how far it is juſt.

Firſt, I would obſerve, that if the word *idea* be taken in the meaning which it had at firſt among the Pythagoreans and Platoniſts, and if by knowledge be meant only abſtract and general knowledge, (which I believe Mr LOCKE had chiefly in his view,) I think the propoſition is true, that ſuch knowledge conſiſts ſolely in perceiving the truth of propoſitions whoſe ſubject and predicate are ideas.

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By ideas here I mean things conceived abſtractly, without regard to their exiſtence: We commonly call them abſtract notions, abſtract conceptions, abſtract ideas; the Peripatetics called them univerſals; and the Platoniſts, who knew no other ideas, called them ideas without addition.

Such ideas are both ſubject and predicate in every propoſition which expreſſes abſtract knowledge.

The whole body of pure mathematics is an abſtract ſcience; and in every mathematical propoſition, both ſubject and predicate are ideas, in the ſenſe above explained. Thus, when I ſay the ſide of a ſquare is not commenſurable to its diagonal: In this propoſition *the ſide and the diagonal of a ſquare* are the ſubjects, (for being a relative propoſition it muſt have two ſubjects.) A ſquare, its ſide, and its diagonal, are ideas or univerſals; they are not individuals, but things predicable of many individuals. Exiſtence is not included in their definition, nor in the conception we form of them. The predicate of the propoſition is *commenſurable*, which muſt be an univerſal, as the predicate of every propoſition is ſo. In other branches of knowledge many abſtract truths may be found, but, for the moſt part, mixed with others that are not abſtract.

I add, that I apprehend that what is ſtrictly called demonſtrative evidence, is to be found in abſtract knowledge only. This was the opinion of ARISTOTLE, of PLATO, and I think of all the ancient Philoſophers; and I believe in this they judged right. It is true, we often meet with demonſtration in aſtronomy, in mechanics, and in other branches of natural philoſophy; but I believe we ſhall always find that ſuch demonſtrations are grounded upon principles or ſuppoſitions, which have neither intuitive nor demonſtrative evidence.

Thus when we demonſtrate, that the path of a projectile *in vacuo* is a parabola, we ſuppoſe that it is acted upon with the ſame

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Ideas, in the ſenſe above explained, are creatures of the mind; they are fabricated by its rational powers; we know their nature and their eſſence; for they are nothing more than they are conceived to be: And becauſe they are perfectly known, we can reaſon about them with the higheſt degree of evidence.

And as they are not things that exiſt, but things conceived, they neither have place nor time, nor are they liable to change.

When we ſay that they are in the mind, this can mean no more but that they are conceived by the mind, or that they are objects of thought. The act of conceiving them is no doubt in the mind; the things conceived have no place, becauſe they have not exiſtence. Thus a circle, conſidered abſtractly, is ſaid figuratively to be in the mind of him that conceives it; but in no other ſenſe than the city of London or the kingdom of France is ſaid to be in his mind when he thinks of thoſe objects.

Place and time belong to finite things that exiſt, but not to things that are barely conceived. They may be objects of conception to intelligent beings in every place, and at all times. Hence the Pythagoreans and Platoniſts were led to think that they are eternal and omnipreſent. If they had exiſtence, they muſt be ſo; for they have no relation to any one place or time, which they have not to every place and to every time.

The natural prejudice of mankind, that what we conceive muſt have exiſtence, led thoſe ancient Philoſophers to attribute exiſtence to ideas; and by this they were led into all the extravagant and myſterious

myſterious parts of their ſyſtem. When it is purged of theſe, I apprehend it to be the only intelligible and rational ſyſtem concerning ideas. CHAP. III.

I agree with them therefore, that ideas are immutably the ſame in all times and places: For this means no more but that a circle is always a circle, and a ſquare always a ſquare.

I agree with them, that ideas are the patterns or exemplars, by which every thing was made that had a beginning: For an intelligent artificer muſt conceive his work before it is made; he makes it according to that conception; and the thing conceived, before it exiſts, can only be an idea.

I agree with them, that every ſpecies of things conſidered abſtractly is an idea; and that the idea of the ſpecies is in every individual of the ſpecies, without diviſion or multiplication. This indeed is expreſſed ſomewhat myſteriouſly, according to the manner of the ſect; but it may eaſily be explained.

Every idea is an attribute; and it is a common way of ſpeaking, to ſay, that the attribute is in every ſubject of which it may truly be affirmed. Thus, *to be above fifty years of age*, is an attribute or idea. This attribute may be in, or affirmed of, fifty different individuals, and be the ſame in all, without diviſion or multiplication.

I think, that not only every ſpecies, but every genus, higher or lower, and every attribute conſidered abſtractly, is an idea. Theſe are things conceived without regard to exiſtence; they are univerſals, and therefore ideas, according to the ancient meaning of that word.

It is true, that, after the Platoniſts entered into diſputes with the Peripatetics, in order to defend the exiſtence of eternal ideas, they found it prudent to contract the line of defence, and maintained only

CHAP. III. only that there is an idea of every ſpecies of natural things, but not of the genera, nor of things artificial. They were unwilling to multiply beings beyond what was neceſſary; but in this I think they departed from the genuine principles of their ſyſtem.

The definition of a ſpecies, is nothing but the definition of the genus, with the addition of a ſpecific difference; and the diviſion of things into ſpecies is the work of the mind, as well as their diviſion into genera and claſſes. A ſpecies, a genus, an order, a claſs, is only a combination of attributes made by the mind, and called by one name. There is therefore the ſame reaſon for giving the name of idea to every attribute, and to every ſpecies and genus, whether higher or lower: Theſe are only more complex attributes, or combinations of the more ſimple. And though it might be improper, without neceſſity, to multiply beings, which they believed to have a real exiſtence; yet, had they ſeen that ideas are not things that exiſt, but things that are conceived, they would have apprehended no danger nor expence from their number.

Simple attributes, ſpecies and genera, lower or higher, are all things conceived without regard to exiſtence; they are univerſals; they are expreſſed by general words; and have an equal title to be called by the name of *ideas*.

I likewiſe agree with thoſe ancient Philoſophers, that ideas are the object, and the ſole object of ſcience, ſtrictly ſo called; that is, of demonſtrative reaſoning.

And as ideas are immutable, ſo their agreements and diſagreements, and all their relations and attributes, are immutable. All mathematical truths are immutably true. Like the ideas about which they are converſant, they have no relation to time or place, no dependence upon exiſtence or change. That the angles of a plane triangle are equal to two right angles, always was and always will be true, though no triangle had ever exiſted.

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The ſame may be ſaid of all abſtract truths. On that account they have often been called eternal truths: And for the ſame reaſon the Pythagoreans aſcribed eternity to the ideas about which they are converſant. They may very properly be called neceſſary truths; becauſe it is impoſſible they ſhould not be true at all times and in all places.

Such is the nature of all truth that can be diſcovered, by perceiving the agreements and diſagreements of *ideas*, when we take that word in its primitive ſenſe. And that Mr LOCKE, in his definition of knowledge, had chiefly in his view abſtract truths, we may be led to think from the examples he gives to illuſtrate it.

But there is another great claſs of truths, which are not abſtract and neceſſary, and therefore cannot be perceived in the agreements and diſagreements of ideas. Theſe are all the truths we know concerning the real exiſtence of things; the truth of our own exiſtence; of the exiſtence of other things, inanimate, animal and rational, and of their various attributes and relations.

Theſe truths may be called contingent truths. I except only the exiſtence and attributes of the Supreme Being, which is the only neceſſary truth I know regarding exiſtence.

All other beings that exiſt, depend for their exiſtence, and all that belongs to it, upon the will and power of the firſt cauſe; therefore, neither their exiſtence, nor their nature, nor any thing that befals them, is neceſſary, but contingent.

But although the exiſtence of the Deity be neceſſary, I apprehend we can only deduce it from contingent truths. The only arguments for the exiſtence of a Deity which I am able to comprehend, are grounded upon the knowledge of my own exiſtence, and the exiſtence of other finite beings. But theſe are contingent truths.

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I believe, therefore, that by perceiving agreements and diſagreements of ideas, no contingent truth whatſoever can be known, nor the real exiſtence of any thing, not even our own exiſtence, nor the exiſtence of a Deity, which is a neceſſary truth. Thus I have endeavoured to ſhew what knowledge may, and what cannot be attained, by perceiving the agreements and diſagreements of ideas, when we take that word in its primitive ſenſe.

We are, in the *next* place, to conſider, whether knowledge conſiſts in perceiving the agreement or diſagreement of ideas, taking *ideas* in any of the ſenſes in which the word is uſed by Mr LOCKE and other modern Philoſophers.

1. Very often the word *idea* is uſed ſo, that to have the idea of any thing is a *periphraſis* for conceiving it. In this ſenſe, an idea is not an object of thought, it is thought itſelf. It is the act of the mind by which we conceive any object. And it is evident that this could not be the meaning which Mr LOCKE had in view in his definition of knowledge.

2. A ſecond meaning of the word *idea* is that which Mr LOCKE gives in the introduction to his Eſſay, when he is making an apology for the frequent uſe of it. "It being that term, I think, "which ſerves beſt to ſtand for whatſoever is the object of the "underſtanding when a man thinks, or whatever it is which a "man can be employed about in thinking."

By this definition, indeed, every thing that can be the object of thought is an idea. The objects of our thoughts may, I think, be reduced to two claſſes.

The firſt claſs comprehends all thoſe objects which we not only can think of, but which we believe to have a real exiſtence. Such as the Creator of all things, and all his creatures that fall within our notice. I can think of the ſun and moon, the earth and ſea, and

and of the various animal, vegetable, and inanimate productions with which it hath pleaſed the bountiful Creator to enrich our globe. I can think of myſelf, of my friends and acquaintance. I think of the author of the Eſſay with high eſteem. Theſe, and ſuch as theſe, are objects of the underſtanding which we believe to have real exiſtence.

A ſecond claſs of objects of the underſtanding which a man may be employed about in thinking, are things which we either believe never to have exiſted, or which we think of without regard to their exiſtence.

Thus, I can think of DON QUIXOTE, of the iſland of Laputa, of Oceana, and of Utopia, which I believe never to have exiſted. Every attribute, every ſpecies, and every genus of things, conſidered abſtractly, without any regard to their exiſtence or non-exiſtence, may be an object of the underſtanding.

To this ſecond claſs of objects of the underſtanding, the name of idea does very properly belong, according to the primitive ſenſe of the word, and I have already conſidered what knowledge does, and what does not conſiſt in perceiving the agreements and diſagreements of ſuch ideas.

But if we take the word idea in ſo extenſive a ſenſe as to comprehend, not only the ſecond, but alſo the firſt claſs of objects of the underſtanding, it will undoubtedly be true, that all knowledge conſiſts in perceiving the agreements and diſagreements of ideas: For it is impoſſible that there can be any knowledge, any judgment, any opinion, true or falſe, which is not employed about the objects of the underſtanding. But whatſoever is an object of the underſtanding is an idea, according to this ſecond meaning of the word.

Yet I am perſuaded that Mr LOCKE, in his definition of knowledge, did not mean that the word idea ſhould extend to all thoſe

CHAP. III. things which we commonly conſider as objects of the underſtanding.

Though Biſhop BERKELEY believed that ſun, moon, and ſtars, and all material things, are ideas, and nothing but ideas, Mr LOCKE no where profeſſes this opinion. He believed that we have ideas of bodies, but not that bodies are ideas. In like manner, he believed that we have ideas of minds, but not that minds are ideas. When he enquired ſo carefully into the origin of all our ideas, he did not ſurely mean to find the origin of whatſoever may be the object of the underſtanding, nor to reſolve the origin of every thing that may be an object of underſtanding into ſenſation and reflection.

3. Setting aſide, therefore, the two meanings of the word idea before mentioned, as meanings which Mr LOCKE could not have in his view in the definition he gives of knowledge, the only meaning that could be intended in this place is that which I before called the philoſophical meaning of the word idea, which hath a reference to the theory commonly received about the manner in which the mind perceives external objects, and in which it remembers and conceives objects that are not preſent to it. It is a very ancient opinion, and has been very generally received among Philoſophers, that we cannot perceive or think of ſuch objects immediately, but by the medium of certain images or repreſentatives of them really exiſting in the mind at the time.

To thoſe images the ancients gave the name of ſpecies and phantaſms. Modern Philoſophers have given them the name of ideas. "'Tis evident," ſays Mr LOCKE, book 4. ch. 4. "the "mind knows not things immediately, but only by the intervention of the ideas it has of them." And in the ſame paragraph he puts this queſtion: "How ſhall the mind, when it perceives "nothing but its own ideas, know that they agree with things "themſelves?"

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This theory I have already conſidered, in treating of perception, of memory, and of conception. The reader will there find the reaſons that lead me to think, that it has no ſolid foundation in reaſon, or in attentive reflection upon thoſe operations of our minds; that it contradicts the immediate dictates of our natural faculties, which are of higher authority than any theory; that it has taken its riſe from the ſame prejudices which led all the ancient Philoſophers to think that the Deity could not make this world without ſome eternal matter to work upon, and which led the Pythagoreans and Platoniſts to think, that he could not conceive the plan of the world he was to make without eternal ideas really exiſting as patterns to work by; and that this theory, when its neceſſary conſequences are fairly purſued, leads to abſolute ſcepticiſm, though thoſe conſequences were not ſeen by moſt of the Philoſophers who have adopted it.

I have no intention to repeat what has before been ſaid upon thoſe points; but only, taking ideas in this ſenſe, to make ſome obſervations upon the definition which Mr LOCKE gives of knowledge.

Firſt, If all knowledge conſiſts in perceiving the agreements and diſagreements of ideas, that is, of repreſentative images of things exiſting in the mind, it obviouſly follows, that if there be no ſuch ideas, there can be no knowledge: So that, if there ſhould be found good reaſon for giving up this philoſophical hypotheſis, all knowledge muſt go along with it.

I hope, however, it is not ſo; and that though this hypotheſis, like many others, ſhould totter and fall to the ground, knowledge will continue to ſtand firm, upon a more permanent baſis.

The cycles and epicycles of the ancient Aſtronomers were for a thouſand years thought abſolutely neceſſary to explain the motions of the heavenly bodies. Yet now, when all men believe

CHAP. III. them to have been mere fictions, aſtronomy has not fallen with them, but ſtands upon a more rational foundation than before. Ideas, or images of things exiſting in the mind, have for a longer time been thought neceſſary for explaining the operations of the underſtanding. If they ſhould likewiſe at laſt be found to be fictions, human knowledge and judgment would ſuffer nothing, by being diſengaged from an unwieldy hypotheſis. Mr LOCKE ſurely did not look upon the exiſtence of ideas as a philoſophical hypotheſis. He thought that we are conſcious of their exiſtence, otherwiſe he would not have made the exiſtence of all our knowledge to depend upon the exiſtence of ideas.

Secondly, Suppoſing this hypotheſis to be true, I agree with Mr LOCKE, that it is an evident and neceſſary conſequence that our knowledge can be converſant about ideas only, and muſt conſiſt in perceiving their attributes and relations. For nothing can be more evident than this, that all knowledge, and all judgment and opinion, muſt be about things which are or may be immediate objects of our thought. What cannot be the object of thought, or the object of the mind in thinking, cannot be the object of knowledge or of opinion.

Every thing we can know of any object muſt be either ſome attribute of the object, or ſome relation it bears to ſome other object or objects. By the agreements and diſagreements of objects, I apprehend Mr LOCKE intended to expreſs both their attributes and their relations. If ideas then be the only objects of thought, the conſequence is neceſſary, that they muſt be the only objects of knowledge, and all knowledge muſt conſiſt in perceiving their agreements and diſagreements, that is, their attributes and relations.

The uſe I would make of this conſequence, is to ſhow that the hypotheſis muſt be falſe, from which it neceſſarily follows: For if we have any knowledge of things that are not ideas, it will follow no leſs evidently, that ideas are not the only objects of our thoughts.

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Mr LOCKE has pointed out the extent and limits of human knowledge in his fourth book, with more accuracy and judgment than any Philoſopher had done before; but he has not confined it to the agreements and diſagreements of ideas. And I cannot help thinking, that a great part of that book is an evident refutation of the principles laid down in the beginning of it.

Mr LOCKE did not believe that he himſelf was an idea; that his friends and acquaintance were ideas; that the Supreme Being, to ſpeak with reverence, is an idea; or that the ſun and moon, the earth and the ſea, and other external objects of ſenſe, are ideas. He believed that he had ſome certain knowledge of all thoſe objects. His knowledge, therefore, did not conſiſt ſolely in perceiving the agreements and diſagreements of his ideas: For, ſurely, to perceive the exiſtence, the attributes, and relations of things, which are not ideas, is not to perceive the agreements and diſagreements of ideas. And if things which are not ideas be objects of knowledge, they muſt be objects of thought. On the contrary, if ideas be the only objects of thought, there can be no knowledge either of our own exiſtence, or of the exiſtence of external objects, or of the exiſtence of a Deity.

This conſequence, as far as concerns the exiſtence of external objects of ſenſe, was afterwards deduced from the theory of ideas by Biſhop BERKELEY with the cleareſt evidence; and that author choſe rather to adopt the conſequence than to reject the theory on which it was grounded. But, with regard to the exiſtence of our own minds, of other minds, and of a Supreme Mind, the Biſhop, that he might avoid the conſequence, rejected a part of the theory, and maintained, that we can think of minds, of their attributes and relations, without ideas.

Mr HUME ſaw very clearly the conſequences of this theory, and adopted them in his ſpeculative moments; but candidly acknowledges, that, in the common buſineſs of life, he found himſelf under

CHAP. III. der a neceſſity of believing with the vulgar. His Treatiſe of Human Nature is the only ſyſtem to which the theory of ideas leads; and, in my apprehenſion, is, in all its parts, the neceſſary conſequence of that theory.

Mr LOCKE, however, did not ſee all the conſequences of that theory; he adopted it without doubt or examination, carried along by the ſtream of Philoſophers that went before him; and his judgment and good ſenſe have led him to ſay many things, and to believe many things that cannot be reconciled to it.

He not only believed his own exiſtence, the exiſtence of external things, and the exiſtence of a Deity; but he has ſhown very juſtly how we come by the knowledge of theſe exiſtences.

It might here be expected, that he ſhould have pointed out the agreements and diſagreements of ideas from which theſe exiſtences are deduced; but this is impoſſible, and he has not even attempted it.

Our own exiſtence, he obſerves, *we know intuitively*; but this intuition is not a perception of the agreement or diſagreement of ideas; for the ſubject of the propoſition, *I exiſt*, is not an idea, but a perſon.

The knowledge of external objects of ſenſe, he obſerves, *we can have only by ſenſation. This ſenſation* he afterwards expreſſes more clearly by *the teſtimony of our ſenſes, which are the proper and ſole judges of this thing*; whoſe teſtimony *is the greateſt aſſurance we can poſſibly have, and to which our faculties can attain.* This is perfectly agreeable to the common ſenſe of mankind, and is perfectly underſtood by thoſe who never heard of the theory of ideas. Our ſenſes teſtify immediately the exiſtence, and many of the attributes and relations of external material beings; and, by our conſtitution, we rely with aſſurance upon their teſtimony, without ſeeking a reaſon for doing

doing ſo. This aſſurance, Mr LOCKE acknowledges, deſerves the name of knowledge. But thoſe external things are not ideas, nor are their attributes and relations the agreements and diſagreements of ideas, but the agreements and diſagreements of things which are not ideas.

To reconcile this to the theory of ideas, Mr LOCKE ſays, *That it is the actual receiving of ideas from without that gives us notice of the exiſtence of thoſe external things.*

This, if underſtood literally, would lead us back to the doctrine of ARISTOTLE, that our ideas or ſpecies come from without from the external objects, and are the image or form of thoſe objects. But Mr LOCKE, I believe, meant no more by it, but that our ideas of ſenſe muſt have a cauſe, and that we are not the cauſe of them ourſelves.

Biſhop BERKELEY acknowledges all this, and ſhews very clearly, that it does not afford the leaſt ſhadow of reaſon for the belief of any material object. Nay, that there can be nothing external that has any reſemblance to our ideas but the ideas of other minds.

It is evident, therefore, that the agreements and diſagreements of ideas can give us no knowledge of the exiſtence of any material thing. If any knowledge can be attained of things which are not ideas, that knowledge is a perception of agreements and diſagreements, not of ideas, but of things that are not ideas.

As to the exiſtence of a Deity, though Mr LOCKE was aware that DES CARTES, and many after him, had attempted to prove it merely from the agreements and diſagreements of ideas; yet "he thought it an ill way of eſtabliſhing that truth, and ſilencing "Atheiſts, to lay the whole ſtreſs of ſo important a point upon "that ſole foundation." And therefore he proves this point with great ſtrength and ſolidity, from our own exiſtence, and the exiſtence

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ence of the ſenſible parts of the univerſe. By memory, Mr LOCKE ſays, we have the knowledge of the paſt exiſtence of ſeveral things: But all conception of paſt exiſtence, as well as of external exiſtence, is irreconcileable to the theory of ideas; becauſe it ſuppoſes that there may be immediate objects of thought, which are not ideas preſently exiſting in the mind.

I conclude therefore, that if we have any knowledge of our own exiſtence, or of the exiſtence of what we ſee about us, or of the exiſtence of a Supreme Being; or if we have any knowledge of things paſt by memory, that knowledge cannot conſiſt in perceiving the agreements and diſagreements of ideas.

This concluſion, indeed, is evident of itſelf: For if knowledge conſiſts ſolely in the perception of the agreement or diſagreement of ideas, there can be no knowledge of any propoſition which does not expreſs ſome agreement or diſagreement of ideas; conſequently there can be no knowledge of any propoſition, which expreſſes either the exiſtence, or the attributes or relations of things, which are not ideas. If therefore the theory of ideas be true, there can be no knowledge of any thing but of ideas. And, on the other hand, if we have any knowledge of any thing beſides ideas, that theory muſt be falſe.

There can be no knowledge, no judgment, or opinion about things which are not immediate objects of thought. This I take to be ſelf-evident. If, therefore, ideas be the only immediate objects of thought, they muſt be the only things in nature of which we can have any knowledge, and about which we can have any judgment or opinion.

This neceſſary conſequence of the common doctrine of ideas Mr HUME ſaw, and has made evident in his Treatiſe of Human Nature; but the uſe he made of it was not to overturn the theory with which it is neceſſarily connected, but to overturn all knowledge,

ledge, and to leave no ground to believe any thing whatſoever. If Mr LOCKE had ſeen this conſequence, there is reaſon to think that he would have made another uſe of it. CHAP. III.

That a man of Mr LOCKE's judgment and penetration did not perceive a conſequence ſo evident, ſeems indeed very ſtrange; and I know no other account that can be given of it but this, that the ambiguity of the word *idea* has miſled him in this, as in ſeveral other inſtances. Having at firſt defined ideas to be whatſoever is the object of the underſtanding when we think, he takes it very often in that unlimited ſenſe; and ſo every thing that can be an object of thought is an idea. At other times, he uſes the word to ſignify certain repreſentative images of things in the mind, which Philoſophers have ſuppoſed to be immediate objects of thought. At other times, things conceived abſtractly, without regard to their exiſtence, are called ideas. Philoſophy is much indebted to Mr LOCKE for his obſervations on the abuſe of words. It is pity he did not apply theſe obſervations to the word *idea*, the ambiguity and abuſe of which has very much hurt his excellent Eſſay.

There are ſome other opinions of Philoſophers concerning judgment, of which I think it unneceſſary to ſay much.

Mr HUME ſometimes adopts Mr LOCKE's opinion, that it is the perception of the agreement or diſagreement of our ideas; ſometimes he maintains, that judgment and reaſoning reſolve themſelves into conception, and are nothing but particular ways of conceiving objects; and he ſays, that an opinion or belief may moſt accurately be defined, *a lively idea related to or aſſociated with a preſent impreſſion*, Treatiſe of Human Nature, vol. 1. page 172.

I have endeavoured before, in the firſt chapter of this Eſſay, to ſhew that judgment is an operation of mind ſpecifically diſtinct from the bare conception of an object. I have alſo conſidered his notion of belief, in treating of the theories concerning memory.

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Dr HARTLEY ſays, " That aſſent and diſſent muſt come under " the notion of ideas, being only thoſe very complex internal " feelings which adhere by aſſociation to ſuch cluſters of words as " are called propoſitions in general, or affirmations and negations " in particular."

This, if I underſtand its meaning, agrees with the opinion of Mr HUME above mentioned, and has therefore been before conſidered.

Dr PRIESTLY has given another definition of judgment. " It is " nothing more than the perception of the univerſal concurrence, " or the perfect coincidence of two ideas; or the want of that " concurrence or coincidence." This I think coincides with Mr " LOCKE's definition, and therefore has been already conſidered."

There are many particulars which deſerve to be known, and which might very properly be conſidered in this Eſſay on judgment; concerning the various kinds of propoſitions by which our judgments are expreſſed; their ſubjects and predicates; their converſions and oppoſitions: But as theſe are to be found in every ſyſtem of logic from ARISTOTLE down to the preſent age, I think it unneceſſary to ſwell this Eſſay with the repetition of what has been ſaid ſo often. The remarks which have occurred to me upon what is commonly ſaid on theſe points, as well as upon the art of ſyllogiſm; the utility of the ſchool logic, and the improvements that may be made in it, may be found in *a Short Account of* ARISTOTLE's *Logic with Remarks*, which Lord KAMES has honoured with a place in his *Sketches of the Hiſtory of Man*.

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Of firſt Principles in General.

ONE of the moſt important diſtinctions of our judgments is, that ſome of them are intuitive, others grounded on argument.

It is not in our power to judge as we will. The judgment is carried along neceſſarily by the evidence, real or ſeeming, which appears to us at the time. But in propoſitions that are ſubmitted to our judgment, there is this great difference; ſome are of ſuch a nature that a man of ripe underſtanding may apprehend them diſtinctly, and perfectly underſtand their meaning without finding himſelf under any neceſſity of believing them to be true or falſe, probable or improbable. The judgment remains in ſuſpence, until it is inclined to one ſide or another by reaſons or arguments.

But there are other propoſitions which are no ſooner underſtood than they are believed. The judgment follows the apprehenſion of them neceſſarily, and both are equally the work of nature, and the reſult of our original powers. There is no ſearching for evidence, no weighing of arguments; the propoſition is not deduced or inferred from another; it has the light of truth in itſelf, and has no occaſion to borrow it from another.

Propoſitions of the laſt kind, when they are uſed in matters of ſcience, have commonly been called *axioms;* and on whatever occaſion they are uſed, are called *firſt principles*, *principles of common ſenſe*, *common notions*, *ſelf-evident truths.* CICERO calls them *Naturæ judicia*, *judicia communibus hominum ſenſibus infixa.* Lord SHAFTESBURY expreſſes them by the words, *natural knowledge*, *fundamental reaſon*, and *common ſenſe.*

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What has been ſaid, I think, is ſufficient to diſtinguiſh firſt principles, or intuitive judgments, from thoſe which may be aſcribed to the power of reaſoning; nor is it a juſt objection againſt this diſtinction, that there may be ſome judgments concerning which we may be dubious to which claſs they ought to be referred. There is a real diſtinction between perſons within the houſe, and thoſe that are without; yet it may be dubious to which the man belongs that ſtands upon the threſhold.

The power of reaſoning, that is of drawing a concluſion from a chain of premiſes, may with ſome propriety be called an art. "All reaſoning," ſays Mr LOCKE, "is ſearch and caſting about, "and requires pains and application." It reſembles the power of walking, which is acquired by uſe and exerciſe. Nature prompts to it, and has given the power of acquiring it; but muſt be aided by frequent exerciſe before we are able to walk. After repeated efforts, much ſtumbling, and many falls, we learn to walk; and it is in a ſimilar manner that we learn to reaſon.

But the power of judging in ſelf-evident propoſitions, which are clearly underſtood, may be compared to the power of ſwallowing our food. It is purely natural, and therefore common to the learned, and the unlearned; to the trained, and the untrained: It requires ripeneſs of underſtanding, and freedom from prejudice, but nothing elſe.

I take it for granted, that there are ſelf-evident principles. Nobody, I think, denies it. And if any man were ſo ſceptical as to deny that there is any propoſition that is ſelf-evident, I ſee not how it would be poſſible to convince him by reaſoning.

But yet there ſeems to be great difference of opinions among Philoſophers about firſt principles. What one takes to be ſelf-evident, another labours to prove by arguments, and a third denies altogether.

Thus,

Thus, before the time of DES CARTES, it was taken for a firſt principle, that there is a ſun and a moon, an earth and ſea, which really exiſt, whether we think of them or not. DES CARTES thought that the exiſtence of thoſe things ought to be proved by argument; and in this he has been followed by MALEBRANCHE, ARNAULD, and LOCKE. They have all laboured to prove, by very weak reaſoning, the exiſtence of external objects of ſenſe; and BERKELEY and HUME, ſenſible of the weakneſs of their arguments, have been led to deny their exiſtence altogether.

The ancient Philoſophers granted, that all knowledge muſt be grounded on firſt principles, and that there is no reaſoning without them. The Peripatetic philoſophy was redundant rather than deficient in firſt principles. Perhaps the abuſe of them in that ancient ſyſtem may have brought them into diſcredit in modern times; for as the beſt things may be abuſed, ſo that abuſe is apt to give a diſguſt to the thing itſelf; and as one extreme often leads into the oppoſite, this ſeems to have been the caſe in the reſpect paid to firſt principles in ancient and in modern times.

DES CARTES thought one principle, expreſſed in one word *cogito*, a ſufficient foundation for his whole ſyſtem, and aſked no more.

Mr LOCKE ſeems to think firſt principles of very ſmall uſe. Knowledge conſiſting, according to him, in the perception of the agreement or diſagreement of our ideas; when we have clear ideas, and are able to compare them together, we may always fabricate firſt principles as often as we have occaſion for them. Such differences we find among Philoſophers about firſt principles.

It is likewiſe a queſtion of ſome moment, whether the differences among men about firſt principles can be brought to any iſſue? When, in diſputes, one man maintains that to be a firſt principle, which another denies, commonly both parties appeal to common ſenſe, and ſo the matter reſts. Now, is there no way of diſcuſſing this

CHAP. IV. this appeal? Is there no mark or criterion, whereby firſt principles that are truly ſuch, may be diſtinguiſhed from thoſe that aſſume the character without a juſt title? I ſhall humbly offer in the following propoſitions what appears to me to be agreeable to truth in theſe matters, always ready to change my opinion upon conviction.

1. *Firſt*, I hold it to be certain, and even demonſtrable, That all knowledge got by reaſoning muſt be built upon firſt principles.

This is as certain as that every houſe muſt have a foundation. The power of reaſoning, in this reſpect, reſembles the mechanical powers or engines; it muſt have a fixed point to reſt upon, otherwiſe it ſpends its force in the air, and produces no effect.

When we examine, in the way of analyſis, the evidence of any propoſition, either we find it ſelf-evident, or it reſts upon one or more propoſitions that ſupport it. The ſame thing may be ſaid of the propoſitions that ſupport it; and of thoſe that ſupport them, as far back as we can go. But we cannot go back in this track to infinity. Where then muſt this analyſis ſtop? It is evident that it muſt ſtop only when we come to propoſitions, which ſupport all that are built upon them, but are themſelves ſupported by none, that is, to ſelf-evident propoſitions.

Let us again conſider a ſynthetical proof of any kind, where we begin with the premiſes, and purſue a train of conſequences, until we come to the laſt concluſion, or thing to be proved. Here we muſt begin, either with ſelf-evident propoſitions, or with ſuch as have been already proved. When the laſt is the caſe, the proof of the propoſitions, thus aſſumed, is a part of our proof; and the proof is deficient without it. Suppoſe then the deficiency ſupplied, and the proof completed, is it not evident that it muſt ſet out with ſelf-evident propoſitions, and that the whole evidence muſt reſt upon them? So that it appears to be demonſtrable that, without firſt principles, analytical reaſoning could have no end, and ſynthetical

thetical reaſoning could have no beginning; and that every concluſion got by reaſoning muſt reſt with its whole weight upon firſt principles, as the building does upon its foundation.

2. A *ſecond* propoſition is, That ſome firſt principles yield concluſions that are certain, others ſuch as are probable, in various degrees, from the higheſt probability to the loweſt.

In juſt reaſoning, the ſtrength or weakneſs of the concluſion will always correſpond to that of the principles on which it is grounded.

In a matter of teſtimony, it is ſelf-evident, that the teſtimony of two is better than that of one, ſuppoſing them equal in character, and in their means of knowledge; yet the ſimple teſtimony may be true, and that which is preferred to it may be falſe.

When an experiment has ſucceeded in ſeveral trials, and the circumſtances have been marked with care, there is a ſelf-evident probability of its ſucceeding in a new trial; but there is no certainty. The probability, in ſome caſes, is much greater than in others; becauſe, in ſome caſes, it is much eaſier to obſerve all the circumſtances that may have influence upon the event than in others. And it is poſſible, that, after many experiments made with care, our expectation may be fruſtrated in a ſucceeding one, by the variation of ſome circumſtance that has not, or perhaps could not be obſerved.

Sir ISAAC NEWTON has laid it down as a firſt principle in natural philoſophy, that a property which has been found in all bodies upon which we have had acceſs to make experiments, and which has always been found in its quantity to be in exact proportion to the quantity of matter in every body, is to be held as an univerſal property of matter.

This principle, as far as I know, has never been called in queſtion.

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ſtion. The evidence we have, that all matter is diviſible, moveable, ſolid, and inert, is reſolveable into this principle; and if it be not true, we cannot have any rational conviction that all matter has thoſe properties. From the ſame principle that great man has ſhewn, that we have reaſon to conclude, that all bodies gravitate towards each other.

This principle, however, has not that kind of evidence which mathematical axioms have. It is not a neceſſary truth whoſe contrary is impoſſible; nor did Sir ISAAC ever conceive it to be ſuch. And if it ſhould ever be found, by juſt experiments, that there is any part in the compoſition of ſome bodies which has not gravity, the fact, if duly aſcertained, muſt be admitted as an exception to the general law of gravitation.

In games of chance, it is a firſt principle, that every ſide of a die has an equal chance to be turned up; and that, in a lottery, every ticket has an equal chance of being drawn out. From ſuch firſt principles as theſe, which are the beſt we can have in ſuch matters, we may deduce, by demonſtrative reaſoning, the preciſe degree of probability of every event in ſuch games.

But the principles of all this accurate and profound reaſoning can never yield a certain concluſion, it being impoſſible to ſupply a defect in the firſt principles by any accuracy in the reaſoning that is grounded upon them. As water, by its gravity, can riſe no higher in its courſe than the fountain, however artfully it be conducted; ſo no concluſion of reaſoning can have a greater degree of evidence than the firſt principles from which it is drawn.

From theſe inſtances, it is evident, that as there are ſome firſt principles that yield concluſions of abſolute certainty; ſo there are others that can only yield probable concluſions; and that the loweſt degree of probability muſt be grounded on firſt principles as well as abſolute certainty.

3. A *third* propoſition is, that it would contribute greatly to the ſtability of human knowledge, and conſequently to the improvement of it, if the firſt principles upon which the various parts of it are grounded were pointed out and aſcertained.

We have ground to think ſo, both from facts, and from the nature of the thing.

There are two branches of human knowledge in which this method has been followed, to wit, mathematics and natural philoſophy; in mathematics, as far back as we have books. It is in this ſcience only, that, for more than two thouſand years ſince it began to be cultivated, we find no ſects, no contrary ſyſtems, and hardly any diſputes; or, if there have been diſputes, they have ended as ſoon as the animoſity of parties ſubſided, and have never been again revived. The ſcience, once firmly eſtabliſhed upon the foundation of a few axioms and definitions, as upon a rock, has grown from age to age, ſo as to become the loftieſt and the moſt ſolid fabric that human reaſon can boaſt.

Natural philoſophy, till leſs than two hundred years ago, remained in the ſame fluctuating ſtate with the other ſciences. Every new ſyſtem pulled up the old by the roots. The ſyſtem-builders, indeed, were always willing to accept of the aid of firſt principles, when they were of their ſide; but finding them inſufficient to ſupport the fabric which their imagination had raiſed, they were only brought in as auxiliaries, and ſo intermixed with conjectures, and with lame inductions, that their ſyſtems were like NEBUCHADNEZZAR'S image, whoſe feet were partly of iron and partly of clay.

Lord BACON firſt delineated the only ſolid foundation on which natural philoſophy can be built; and Sir ISAAC NEWTON reduced the principles laid down by BACON into three or four axioms, which he calls *regulæ philoſophandi*. From theſe, together with the phænomena obſerved by the ſenſes, which he likewiſe lays down

CHAP. IV. as firſt principles, he deduces, by ſtrict reaſoning, the propoſitions contained in the third book of his Principia, and in his Optics; and by this means has raiſed a fabric in thoſe two branches of natural philoſophy, which is not liable to be ſhaken by doubtful diſputation, but ſtands immoveable upon the baſis of ſelf-evident principles.

This fabric has been carried on by the acceſſion of new diſcoveries; but is no more ſubject to revolutions.

The diſputes about *materia prima*, ſubſtantial forms, Nature's abhorring a vacuum, and bodies having no gravitation in their proper place, are now no more. The builders in this work are not put to the neceſſity of holding a weapon in one hand while they build with the other; their whole employment is to carry on the work.

Yet it ſeems to be very probable, that if natural philoſophy had not been reared upon this ſolid foundation of ſelf-evident principles, it would have been to this day a field of battle, wherein every inch of ground would have been diſputed, and nothing fixed and determined.

I acknowledge that mathematics and natural philoſophy, eſpecially the former, have this advantage of moſt other ſciences, that it is leſs difficult to form diſtinct and determinate conceptions of the objects about which they are employed; but as this difficulty is not inſuperable, it affords a good reaſon, indeed, why other ſciences ſhould have a longer infancy; but no reaſon at all why they may not at laſt arrive at maturity, by the ſame ſteps as thoſe of quicker growth.

The facts I have mentioned may therefore lead us to conclude, that if in other branches of philoſophy the firſt principles were laid down, as has been done in mathematics and natural philoſophy,

ſophy, and the ſubſequent concluſions grounded upon them, this would make it much more eaſy to diſtinguiſh what is ſolid and well ſupported from the vain fictions of human fancy.

But laying aſide facts, the nature of the thing leads to the ſame concluſion.

For when any ſyſtem is grounded upon firſt principles, and deduced regularly from them, we have a thread to lead us through the labyrinth. The judgment has a diſtinct and determinate object. The heterogeneous parts being ſeparated, can be examined each by itſelf.

The whole ſyſtem is reduced to axioms, definitions, and deductions. Theſe are materials of very different nature, and to be meaſured by a very different ſtandard; and it is much more eaſy to judge of each, taken by itſelf, than to judge of a maſs wherein they are kneaded together without diſtinction. Let us conſider how we judge of each of them.

Firſt, As to definitions, the matter is very eaſy. They relate only to words, and differences about them may produce different ways of ſpeaking, but can never produce different ways of thinking, while every man keeps to his own definitions.

But as there is not a more plentiful ſource of fallacies in reaſoning than mens uſing the ſame word ſometimes in one ſenſe and at other times in another, the beſt means of preventing ſuch fallacies, or of detecting them when they are committed, is definitions of words as accurate as can be given.

Secondly, As to deductions drawn from principles granted on both ſides, I do not ſee how they can long be a matter of diſpute among men who are not blinded by prejudice or partiality: For the rules of reaſoning by which inferences may be drawn

CHAP. IV. from premiſes have been for two thouſand years fixed with great unanimity. No man pretends to diſpute the rules of reaſoning laid down by ARISTOTLE, and repeated by every writer in dialectics.

And we may obſerve by the way, that the reaſon why Logicians have been ſo unanimous in determining the rules of reaſoning, from ARISTOTLE down to this day, ſeems to be, that they were by that great genius raiſed, in a ſcientific manner, from a few definitions and axioms. It may farther be obſerved, that when men differ about a deduction, whether it follows from certain premiſes, this I think is always owing to their differing about ſome firſt principle. I ſhall explain this by an example.

Suppoſe that, from a thing having begun to exiſt, one man infers that it muſt have had a cauſe; another man does not admit the inference. Here it is evident, that the firſt takes it for a ſelf-evident principle, that every thing which begins to exiſt muſt have a cauſe. The other does not allow this to be ſelf-evident. Let them ſettle this point, and the diſpute will be at an end.

Thus I think it appears, that in matters of ſcience, if the terms be properly explained, the firſt principles upon which the reaſoning is grounded be laid down and expoſed to examination, and the concluſions regularly deduced from them, it might be expected, that men of candour and capacity, who love truth, and have patience to examine things coolly, might come to unanimity with regard to the force of the deductions, and that their differences might be reduced to thoſe they may have about firſt principles.

4. A *fourth* propoſition is, that Nature hath not left us deſtitute of means whereby the candid and honeſt part of mankind may be brought to unanimity when they happen to differ about firſt principles.

When men differ about things that are taken to be firſt principles

ciples or ſelf-evident truths, reaſoning ſeems to be at an end. Each party appeals to common ſenſe. When one man's common ſenſe gives one determination, another man's a contrary determination, there ſeems to be no remedy but to leave every man to enjoy his own opinion. This is a common obſervation, and I believe a juſt one, if it be rightly underſtood.

It is in vain to reaſon with a man who denies the firſt principles on which the reaſoning is grounded. Thus, it would be in vain to attempt the proof of a propoſition in EUCLID to a man who denies the axioms. Indeed, we ought never to reaſon with men who deny firſt principles from obſtinacy and unwillingneſs to yield to reaſon.

But is it not poſſible, that men who really love truth, and are open to conviction, may differ about firſt principles?

I think it is poſſible, and that it cannot, without great want of charity, be denied to be poſſible.

When this happens, every man who believes that there is a real diſtinction between truth and error, and that the faculties which God has given us are not in their nature fallacious, muſt be convinced that there is a defect, or a perverſion of judgment on the one ſide or the other.

A man of candour and humility will, in ſuch a caſe, very naturally ſuſpect his own judgment, ſo far as to be deſirous to enter into a ſerious examination, even of what he has long held as a firſt principle. He will think it not impoſſible, that although his heart be upright, his judgment may have been perverted, by education, by authority, by party zeal, or by ſome other of the common cauſes of error, from the influence of which neither parts nor integrity exempt the human underſtanding.

In

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In ſuch a ſtate of mind, ſo amiable, and ſo becoming every good man, has Nature left him deſtitute of any rational means by which he may be enabled, either to correct his judgment if it be wrong, or to confirm it if it be right?

I hope it is not ſo. I hope that, by the means which Nature has furniſhed, controverſies about firſt principles may be brought to an iſſue, and that the real lovers of truth may come to unanimity with regard to them.

It is true, that, in other controverſies, the proceſs by which the truth of a propoſition is diſcovered, or its falſehood detected, is, by ſhewing its neceſſary connection with firſt principles, or its repugnancy to them. It is true, likewiſe, that when the controverſy is, whether a propoſition be itſelf a firſt principle, this proceſs cannot be applied. The truth, therefore, in controverſies of this kind, labours under a peculiar diſadvantage. But it has advantages of another kind to compenſate this.

1. For, in the *firſt* place, in ſuch controverſies, every man is a competent judge; and therefore it is difficult to impoſe upon mankind.

To judge of firſt principles, requires no more than a ſound mind free from prejudice, and a diſtinct conception of the queſtion. The learned and the unlearned, the Philoſopher and the day-labourer, are upon a level, and will paſs the ſame judgment, when they are not miſled by ſome bias, or taught to renounce their underſtanding from ſome miſtaken religious principle.

In matters beyond the reach of common underſtanding, the many are led by the few, and willingly yield to their authority. But, in matters of common ſenſe, the few muſt yield to the many, when local and temporary prejudices are removed. No man is now moved by the ſubtile arguments of ZENO againſt motion, though perhaps he knows not how to anſwer them.

The

The ancient ſceptical ſyſtem furniſhes a remarkable inſtance of this truth. That ſyſtem, of which PYRRHO was reputed the father, was carried down, through a ſucceſſion of ages, by very able and acute Philoſophers, who taught men to believe nothing at all, and eſteemed it the higheſt pitch of human wiſdom to with-hold aſſent from every propoſition whatſoever. It was ſupported with very great ſubtilty and learning, as we ſee from the writings of SEXTUS EMPIRICUS, the only author of that ſect whoſe writings have come down to our age. The aſſault of the Sceptics againſt all ſcience ſeems to have been managed with more art and addreſs than the defence of the Dogmatiſts.

Yet, as this ſyſtem was an inſult upon the common ſenſe of mankind, it died away of itſelf; and it would be in vain to attempt to revive it. The modern ſcepticiſm is very different from the ancient, otherwiſe it would not have been allowed a hearing; and, when it has loſt the grace of novelty, it will die away alſo, though it ſhould never be refuted.

The modern ſcepticiſm, I mean that of Mr HUME, is built upon principles which were very generally maintained by Philoſophers, though they did not ſee that they led to ſcepticiſm. Mr HUME, by tracing, with great acuteneſs and ingenuity, the conſequences of principles commonly received, has ſhewn that they overturn all knowledge, and at laſt overturn themſelves, and leave the mind in perfect ſuſpenſe.

2. *Secondly*, We may obſerve, that opinions which contradict firſt principles are diſtinguiſhed from other errors by this; that they are not only falſe, but abſurd: And, to diſcountenance abſurdity, Nature hath given us a particular emotion, to wit, that of ridicule, which ſeems intended for this very purpoſe of putting out of countenance what is abſurd, either in opinion or practice.

This weapon, when properly applied, cuts with as keen an edge as

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as argument. Nature hath furniſhed us with the firſt to expoſe abſurdity; as with the laſt to refute error. Both are well fitted for their ſeveral offices, and are equally friendly to truth when properly uſed.

Both may be abuſed to ſerve the cauſe of error: But the ſame degree of judgment, which ſerves to detect the abuſe of argument in falſe reaſoning, ſerves to detect the abuſe of ridicule when it is wrong directed.

Some have from nature a happier talent for ridicule than others; and the ſame thing holds with regard to the talent of reaſoning. Indeed, I conceive there is hardly any abſurdity, which, when touched with the pencil of a LUCIAN, a SWIFT, or a VOLTAIRE, would not be put out of countenance, when there is not ſome religious panic, or very powerful prejudice, to blind the underſtanding.

But it muſt be acknowledged, that the emotion of ridicule, even when moſt natural, may be ſtifled by an emotion of a contrary nature, and cannot operate till that is removed.

Thus, if the notion of ſanctity is annexed to an object, it is no longer a laughable matter; and this viſor muſt be pulled off before it appears ridiculous. Hence we ſee, that notions which appear moſt ridiculous to all who conſider them coolly and indifferently, have no ſuch appearance to thoſe who never thought of them, but under the impreſſion of religious awe and dread.

Even where religion is not concerned, the novelty of an opinion to thoſe who are too fond of novelties; the gravity and ſolemnity with which it is introduced; the opinion we have entertained of the author; its apparent connection with principles already embraced, or ſubſerviency to intereſts which we have at heart; and, above all, its being fixed in our minds at that time of life when we receive implicitly what we are taught; may cover its abſurdity, and faſcinate the underſtanding for a time.

But

But if ever we are able to view it naked, and ſtripped of thoſe adventitious circumſtances from which it borrowed its importance and authority, the natural emotion of ridicule will exert its force. An abſurdity can be entertained by men of ſenſe no longer than it wears a maſk. When any man is found who has the ſkill or the boldneſs to pull off the maſk, it can no longer bear the light; it ſlinks into dark corners for a while, and then is no more heard of, but as an object of ridicule.

Thus I conceive, that firſt principles, which are really the dictates of common ſenſe, and directly oppoſed to abſurdities in opinion, will always, from the conſtitution of human nature, ſupport themſelves, and gain rather than loſe ground among mankind.

3. *Thirdly*, It may be obſerved, that although it is contrary to the nature of firſt principles to admit of direct or *apodictical* proof; yet there are certain ways of reaſoning even about them, by which thoſe that are juſt and ſolid may be confirmed, and thoſe that are falſe may be detected. It may here be proper to mention ſome of the topics from which we may reaſon in matters of this kind.

Firſt, It is a good argument *ad hominem*, if it can be ſhewn, that a firſt principle which a man rejects, ſtands upon the ſame footing with others which he admits: For, when this is the caſe, he muſt be guilty of an inconſiſtency who holds the one and rejects the other.

Thus the faculties of conſciouſneſs, of memory, of external ſenſe, and of reaſon, are all equally the gifts of Nature. No good reaſon can be aſſigned for receiving the teſtimony of one of them, which is not of equal force with regard to the others. The greateſt Sceptics admit the teſtimony of conſciouſneſs, and allow, that what it teſtifies is to be held as a firſt principle. If therefore they reject the immediate teſtimony of ſenſe, or of memory, they are guilty of an inconſiſtency.

CHAP. IV. *Secondly*, A firſt principle may admit of a proof *ad abſurdum*.

In this kind of proof, which is very common in mathematics, we ſuppoſe the contradictory propoſition to be true. We trace the conſequences of that ſuppoſition in a train of reaſoning; and if we find any of its neceſſary conſequences to be manifeſtly abſurd, we conclude the ſuppoſition from which it followed to be falſe; and therefore its contradictory to be true.

There is hardly any propoſition, eſpecially of thoſe that may claim the character of firſt principles, that ſtands alone and unconnected. It draws many others along with it in a chain that cannot be broken. He that takes it up muſt bear the burden of all its conſequences; and if that is too heavy for him to bear, he muſt not pretend to take it up.

Thirdly, I conceive, that the conſent of ages and nations, of the learned and unlearned, ought to have great authority with regard to firſt principles, where every man is a competent judge.

Our ordinary conduct in life is built upon firſt principles, as well as our ſpeculations in philoſophy; and every motive to action ſuppoſes ſome belief. When we find a general agreement among men, in principles that concern human life, this muſt have great authority with every ſober mind that loves truth.

It is pleaſant to obſerve the fruitleſs pains which Biſhop BERKELEY takes to ſhew, that his ſyſtem of the non-exiſtence of a material world did not contradict the ſentiments of the vulgar, but thoſe only of the Philoſophers.

With good reaſon he dreaded more to oppoſe the authority of vulgar opinion in a matter of this kind, than all the ſchools of Philoſophers.

Here

Here perhaps it will be ſaid, What has authority to do in matters of opinion? Is truth to be determined by moſt votes? Or is authority to be again raiſed out of its grave to tyranniſe over mankind?

I am aware that, in this age, an advocate for authority has a very unfavourable plea; but I wiſh to give no more to authority than is its due.

Moſt juſtly do we honour the names of thoſe benefactors to mankind who have contributed more or leſs to break the yoke of that authority which deprives men of the natural, the unalienable right of judging for themſelves; but while we indulge a juſt animoſity againſt this authority, and againſt all who would ſubject us to its tyranny, let us remember how common the folly is, of going from one faulty extreme into the oppoſite.

Authority, though a very tyrannical miſtreſs to private judgment, may yet, on ſome occaſions, be a uſeful handmaid; this is all ſhe is entitled to, and this is all I plead in her behalf.

The juſtice of this plea will appear by putting a caſe in a ſcience, in which, of all ſciences, authority is acknowledged to have leaſt weight.

Suppoſe a Mathematician has made a diſcovery in that ſcience which he thinks important; that he has put his demonſtration in juſt order; and, after examining it with an attentive eye, has found no flaw in it; I would aſk, Will there not be ſtill in his breaſt ſome diffidence, ſome jealouſy leaſt the ardour of invention may have made him overlook ſome falſe ſtep? This muſt be granted.

He commits his demonſtration to the examination of a mathematical friend, whom he eſteems a competent judge, and waits with impatience the iſſue of his judgment. Here I would aſk again,

CHAP. IV. Whether the verdict of his friend, according as it is favourable or unfavourable, will not greatly increaſe or diminiſh his confidence in his own judgment? Moſt certainly it will, and it ought.

If the judgment of his friend agree with his own, eſpecially if it be confirmed by two or three able judges, he reſts ſecure of his diſcovery without farther examination; but if it be unfavourable, he is brought back into a kind of ſuſpenſe, until the part that is ſuſpected undergoes a new and a more rigorous examination.

I hope what is ſuppoſed in this caſe is agreeable to nature, and to the experience of candid and modeſt men on ſuch occaſions; yet here we ſee a man's judgment, even in a mathematical demonſtration, conſcious of ſome feebleneſs in itſelf, ſeeking the aid of authority to ſupport it, greatly ſtrengthened by that authority, and hardly able to ſtand erect againſt it, without ſome new aid.

Society in judgment, of thoſe who are eſteemed fair and competent judges, has effects very ſimilar to thoſe of civil ſociety; it gives ſtrength and courage to every individual; it removes that timidity which is as naturally the companion of ſolitary judgment, as of a ſolitary man in the ſtate of nature.

Let us judge for ourſelves therefore, but let us not diſdain to take that aid from the authority of other competent judges, which a Mathematician thinks it neceſſary to take in that ſcience, which of all ſciences has leaſt to do with authority.

In a matter of common ſenſe, every man is no leſs a competent judge than a Mathematician is in a mathematical demonſtration; and there muſt be a great preſumption that the judgment of mankind, in ſuch a matter, is the natural iſſue of thoſe faculties which God hath given them. Such a judgment can be erroneous only when there is ſome cauſe of the error, as general as the error is: When this can be ſhewn to be the caſe, I acknowledge it ought to have

have its due weight. But to ſuppoſe a general deviation from truth among mankind in things ſelf-evident, of which no cauſe can be aſſigned, is highly unreaſonable.

Perhaps it may be thought impoſſible to collect the general opinion of men upon any point whatſoever; and therefore, that this authority can ſerve us in no ſtead in examining firſt principles. But I apprehend, that in many caſes this is neither impoſſible nor difficult.

Who can doubt whether men have univerſally believed the exiſtence of a material world? Who can doubt whether men have univerſally believed, that every change that happens in nature muſt have a cauſe? Who can doubt whether men have univerſally believed, that there is a right and a wrong in human conduct; ſome things that merit blame, and others that are entitled to approbation?

The univerſality of theſe opinions, and of many ſuch that might be named, is ſufficiently evident, from the whole tenor of human conduct, as far as our acquaintance reaches, and from the hiſtory of all ages and nations of which we have any records.

There are other opinions that appear to be univerſal, from what is common in the ſtructure of all languages.

Language is the expreſs image and picture of human thoughts; and from the picture we may draw ſome certain concluſions concerning the original.

We find in all languages the ſame parts of ſpeech; we find nouns, ſubſtantive and adjective; verbs, active and paſſive, in their various tenſes, numbers, and moods. Some rules of ſyntax are the ſame in all languages.

Now what is common in the ſtructure of languages, indicates an uniformity

CHAP. IV. uniformity of opinion in thoſe things upon which that ſtructure is grounded.

The diſtinction between ſubſtances, and the qualities belonging to them; between thought, and the being that thinks; between thought, and the objects of thought; is to be found in the ſtructure of all languages: And therefore, ſyſtems of philoſophy, which aboliſh thoſe diſtinctions, wage war with the common ſenſe of mankind.

We are apt to imagine, that thoſe who formed languages were no Metaphyſicians; but the firſt principles of all ſciences are the dictates of common ſenſe, and lie open to all men; and every man who has conſidered the ſtructure of language in a philoſophical light, will find infallible proofs that thoſe who have framed it, and thoſe who uſe it with underſtanding, have the power of making accurate diſtinctions, and of forming general conceptions, as well as Philoſophers. Nature has given thoſe powers to all men, and they can uſe them when their occaſions require it; but they leave it to the Philoſophers to give names to them, and to deſcant upon their nature. In like manner, Nature has given eyes to all men, and they can make good uſe of them; but the ſtructure of the eye, and the theory of viſion, is the buſineſs of Philoſophers.

Fourthly, Opinions that appear ſo early in the minds of men, that they cannot be the effect of education, or of falſe reaſoning, have a good claim to be conſidered as firſt principles. Thus the belief we have, that the perſons about us are living and intelligent beings, is a belief for which perhaps we can give ſome reaſon, when we are able to reaſon; but we had this belief before we could reaſon, and before we could learn it by inſtruction. It ſeems therefore to be an immediate effect of our conſtitution.

The *laſt* topic I ſhall mention is, when an opinion is ſo neceſſary in the conduct of life, that without the belief of it, a man muſt be led

led into a thouſand abſurdities in practice, ſuch an opinion, when we can give no other reaſon for it, may ſafely be taken for a firſt principle. CHAP. IV.

Thus I have endeavoured to ſhew, that although firſt principles are not capable of direct proof, yet differences, that may happen with regard to them among men of candour, are not without remedy; that Nature has not left us deſtitute of means by which we may diſcover errors of this kind; and that there are ways of reaſoning, with regard to firſt principles, by which thoſe that are truly ſuch may be diſtinguiſhed from vulgar errors or prejudices.

CHAP. V.

The firſt Principles of contingent Truths.

"SURELY, ſays Biſhop BERKELEY, it is a work well deſer-
"ving our pains, to make a ſtrict enquiry concerning the firſt
"principles of knowledge; to ſift and examine them on all ſides."
What was ſaid in the laſt chapter, is intended both to ſhew the importance of this enquiry, and to make it more eaſy.

But, in order that ſuch an enquiry may be actually made, it is neceſſary that the firſt principles of knowledge be diſtinguiſhed from other truths, and preſented to view, that they may be ſifted and examined on all ſides. In order to this end, I ſhall attempt a detail of thoſe I take to be ſuch, and of the reaſons why I think them entitled to that character.

If the enumeration ſhould appear to ſome redundant, to others deficient, and to others both; if things, which I conceive to be firſt principles, ſhould to others appear to be vulgar errors, or to be truths which derive their evidence from other truths, and there-

fore

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fore not firſt principles; in theſe things every man muſt judge for himſelf. I ſhall rejoice to ſee an enumeration more perfect in any or in all of thoſe reſpects; being perſuaded, that the agreement of men of judgment and candour in firſt principles, would be of no leſs conſequence to the advancement of knowledge in general, than the agreement of Mathematicians in the axioms of geometry has been to the advancement of that ſcience.

The truths that fall within the compaſs of human knowledge, whether they be ſelf-evident, or deduced from thoſe that are ſelf-evident, may be reduced to two claſſes. They are either neceſſary and immutable truths, whoſe contrary is impoſſible, or they are contingent and mutable, depending upon ſome effect of will and power, which had a beginning, and may have an end.

That a cone is the third part of a cylinder of the ſame baſe and the ſame altitude, is a neceſſary truth. It depends not upon the will and power of any being. It is immutably true, and the contrary impoſſible. That the ſun is the centre, about which the earth, and the other planets of our ſyſtem, perform their revolutions, is a truth; but it is not a neceſſary truth. It depends upon the power and will of that Being who made the ſun and all the planets, and who gave them thoſe motions that ſeemed beſt to him.

If all truths were neceſſary truths, there would be no occaſion for different tenſes in the verbs by which they are expreſſed. What is true in the preſent time, would be true in the paſt and future; and there would be no change or variation of any thing in nature.

We uſe the preſent tenſe in expreſſing neceſſary truths; but it is only becauſe there is no flexion of the verb which includes all times. When I ſay that three is the half of ſix, I uſe the preſent tenſe only; but I mean to expreſs not only what now is, but what always was, and always will be; and ſo every propoſition is to be underſtood by which we mean to expreſs a neceſſary truth. Contingent

tingent truths are of another nature. As they are mutable, they may be true at one time, and not at another; and therefore the expreſſion of them muſt include ſome point or period of time.

If language had been a contrivance of Philoſophers, they would probably have given ſome flexion to the indicative mood of verbs, which extended to all times paſt, preſent, and future; for ſuch a flexion only would be fit to expreſs neceſſary propoſitions, which have no relation to time. But there is no language, as far as I know, in which ſuch a flexion of verbs is to be found. Becauſe the thoughts and diſcourſe of men are ſeldom employed about neceſſary truths, but commonly about ſuch as are contingent; languages are fitted to expreſs the laſt rather than the firſt.

The diſtinction commonly made between abſtract truths, and thoſe that expreſs matters of fact, or real exiſtences, coincides in a great meaſure, but not altogether, with that between neceſſary and contingent truths. The neceſſary truths that fall within our knowledge are for the moſt part abſtract truths. We muſt except the exiſtence and nature of the Supreme Being, which is neceſſary. Other exiſtences are the effects of will and power. They had a beginning, and are mutable. Their nature is ſuch as the Supreme Being was pleaſed to give them. Their attributes and relations muſt depend upon the nature God has given them; the powers with which he has endowed them; and the ſituation in which he hath placed them.

The concluſions deduced by reaſoning from firſt principles, will commonly be neceſſary or contingent, according as the principles are from which they are drawn. On the one hand, I take it to be certain, that whatever can, by juſt reaſoning, be inferred from a principle that is neceſſary, muſt be a neceſſary truth, and that no contingent truth can be inferred from principles that are neceſſary.

Thus, as the axioms in mathematics are all neceſſary truths; ſo

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are all the concluſions drawn from them; that is, the whole body of that ſcience. But from no mathematical truth can we deduce the exiſtence of any thing; not even of the objects of the ſcience.

On the other hand, I apprehend there are very few caſes in which we can, from principles that are contingent, deduce truths that are neceſſary. I can only recollect one inſtance of this kind, namely, that, from the exiſtence of things contingent and mutable, we can infer the exiſtence of an immutable and eternal cauſe of them.

As the minds of men are occupied much more about truths that are contingent than about thoſe that are neceſſary, I ſhall firſt endeavour to point out the principles of the former kind.

1. *Firſt*, then, I hold, as a firſt principle, the exiſtence of every thing of which I am conſcious.

Conſciouſneſs is an operation of the underſtanding of its own kind, and cannot be logically defined. The objects of it are our preſent pains, our pleaſures, our hopes, our fears, our deſires, our doubts, our thoughts of every kind; in a word, all the paſſions, and all the actions and operations of our own minds, while they are preſent. We may remember them when they are paſt; but we are conſcious of them only while they are preſent.

When a man is conſcious of pain, he is certain of its exiſtence; when he is conſcious that he doubts, or believes, he is certain of the exiſtence of thoſe operations.

But the irreſiſtible conviction he has of the reality of thoſe operations is not the effect of reaſoning; it is immediate and intuitive. The exiſtence therefore of thoſe paſſions and operations of our minds, of which we are conſcious, is a firſt principle, which Nature requires us to believe upon her authority.

If

If I am aſked to prove that I cannot be deceived by conſciouſneſs; to prove that it is not a fallacious ſenſe; I can find no proof. I cannot find any antecedent truth from which it is deduced, or upon which its evidence depends. It ſeems to diſdain any ſuch derived authority, and to claim my aſſent in its own right.

If any man could be found ſo frantic as to deny that he thinks, while he is conſcious of it; I may wonder, I may laugh, or I may pity him, but I cannot reaſon the matter with him. We have no common principles from which we may reaſon, and therefore can never join iſſue in an argument.

This, I think, is the only principle of common ſenſe that has never directly been called in queſtion. It ſeems to be ſo firmly rooted in the minds of men, as to retain its authority with the greateſt Sceptics. Mr HUME, after annihilating body and mind, time and ſpace, action and cauſation, and even his own mind, acknowledges the reality of the thoughts, ſenſations and paſſions of which he is conſcious.

No Philoſopher has attempted by any hypotheſis to account for this conſciouſneſs of our own thoughts, and the certain knowledge of their real exiſtence which accompanies it. By this they ſeem to acknowledge, that this at leaſt is an original power of the mind; a power by which we not only have ideas, but original judgments, and the knowledge of real exiſtence.

I cannot reconcile this immediate knowledge of the operations of our own minds with Mr LOCKE's theory, that all knowledge conſiſts in perceiving the agreement and diſagreement of ideas. What are the ideas, from whoſe compariſon the knowledge of our own thoughts reſults? Or what are the agreements or diſagreements which convince a man that he is in pain when he feels it?

Neither can I reconcile it with Mr HUME's theory, that to be-

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lieve the exiſtence of any thing, is nothing elſe than to have a ſtrong and lively conception of it; or, at moſt, that belief is only ſome modification of the idea which is the object of belief. For not to mention, that propoſitions, not ideas, are the object of belief; in all that variety of thoughts and paſſions, of which we are conſcious, we believe the exiſtence of the weak as well as of the ſtrong, the faint as well as the lively. No modification of the operations of our minds diſpoſes us to the leaſt doubt of their real exiſtence.

As therefore the real exiſtence of our thoughts, and of all the operations and feelings of our own minds, is believed by all men; as we find ourſelves incapable of doubting it, and as incapable of offering any proof of it, it may juſtly be conſidered as a firſt principle, or dictate of common ſenſe.

But although this principle reſts upon no other, a very conſiderable and important branch of human knowledge reſts upon it.

For from this ſource of conſciouſneſs is derived all that we know, and indeed all that we can know, of the ſtructure, and of the powers of our own minds; from which we may conclude, that there is no branch of knowledge that ſtands upon a firmer foundation; for ſurely no kind of evidence can go beyond that of conſciouſneſs.

How does it come to paſs then, that in this branch of knowledge there are ſo many and ſo contrary ſyſtems? ſo many ſubtile controverſies that are never brought to an iſſue, and ſo little fixed and determined? Is it poſſible that Philoſophers ſhould differ moſt where they have the ſureſt means of agreement? where every thing is built upon a ſpecies of evidence which all men acquieſce in, and hold to be the moſt certain?

This ſtrange phænomenon may, I think, be accounted for, if we diſtinguiſh

diſtinguiſh between conſciouſneſs and reflection, which are often improperly confounded. CHAP. V.

The firſt is common to all men at all times, but is inſufficient of itſelf to give us clear and diſtinct notions of the operations of which we are conſcious, and of their mutual relations, and minute diſtinctions. The ſecond, to wit, attentive reflection upon thoſe operations, making them objects of thought, ſurveying them attentively, and examining them on all ſides, is ſo far from being common to all men, that it is the lot of very few. The greateſt part of men, either through want of capacity, or from other cauſes, never reflect attentively upon the operations of their own minds. The habit of this reflection, even in thoſe whom Nature has fitted for it, is not to be attained without much pains and practice.

We can know nothing of the immediate objects of ſight, but by the teſtimony of our eyes; and I apprehend, that if mankind had found as great difficulty in giving attention to the objects of ſight, as they find in attentive reflection upon the operations of their own minds, our knowledge of the firſt might have been in as backward a ſtate as our knowledge of the laſt.

But this darkneſs will not laſt for ever. Light will ariſe upon this benighted part of the intellectual globe. When any man is ſo happy as to delineate the powers of the human mind as they really are in nature, men that are free from prejudice, and capable of reflection, will recogniſe their own features in the picture; and then the wonder will be, how things ſo obvious could be ſo long wrapped up in myſtery and darkneſs; how men could be carried away by falſe theories and conjectures, when the truth was to be found in their own breaſts if they had but attended to it.

2. Another firſt principle, I think, is, That the thoughts of which I am conſcious, are the thoughts of a being which I call *myſelf*, my *mind*, my *perſon*.

The

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The thoughts and feelings of which we are conſcious are continually changing, and the thought of this moment is not the thought of the laſt; but ſomething which I call myſelf, remains under this change of thought. This ſelf has the ſame relation to all the ſucceſſive thoughts I am conſcious of, they are all my thoughts; and every thought which is not my thought, muſt be the thought of ſome other perſon.

If any man aſks a proof of this, I confeſs I can give none; there is an evidence in the propoſition itſelf which I am unable to reſiſt. Shall I think, that thought can ſtand by itſelf without a thinking being? or that ideas can feel pleaſure or pain? My nature dictates to me that it is impoſſible.

And that Nature has dictated the ſame to all men, appears from the ſtructure of all languages: For in all languages men have expreſſed thinking, reaſoning, willing, loving, hating, by perſonal verbs, which from their nature require a perſon who thinks, reaſons, wills, loves, or hates. From which it appears, that men have been taught by Nature to believe that thought requires a thinker, reaſon a reaſoner, and love a lover.

Here we muſt leave Mr HUME, who conceives it to be a vulgar error, that beſides the thoughts we are conſcious of, there is a mind which is the ſubject of thoſe thoughts. If the mind be any thing elſe than impreſſions and ideas, it muſt be a word without a meaning. The mind therefore, according to this Philoſopher, is a word which ſignifies a bundle of perceptions; or, when he defines it more accurately, "It is that ſucceſſion of related ideas and impreſ-"ſions, of which we have an intimate memory and conſciouſneſs."

I am, therefore, that ſucceſſion of related ideas and impreſſions of which I have the intimate memory and conſciouſneſs.

But who is the *I* that has this memory and conſciouſneſs of a ſucceſſion

ſucceſſion of ideas and impreſſions? Why, it is nothing but that ſucceſſion itſelf.

Hence I learn, that this ſucceſſion of ideas and impreſſions intimately remembers, and is conſcious of itſelf. I would wiſh to be farther inſtructed, whether the impreſſions remember and are conſcious of the ideas, or the ideas remember and are conſcious of the impreſſions, or if both remember and are conſcious of both? and whether the ideas remember thoſe that come after them, as well as thoſe that were before them? Theſe are queſtions naturally ariſing from this ſyſtem, that have not yet been explained.

This, however, is clear, that this ſucceſſion of ideas and impreſſions, not only remembers and is conſcious, but that it judges, reaſons, affirms, denies; nay, that it eats and drinks, and is ſometimes merry, and ſometimes ſad.

If theſe things can be aſcribed to a ſucceſſion of ideas and impreſſions, in a conſiſtency with common ſenſe, I ſhould be very glad to know what is nonſenſe.

The ſcholaſtic Philoſophers have been wittily ridiculed, by repreſenting them as diſputing upon this queſtion, *Num chimæra bombinans in vacuo poſſit comedere ſecundas intentiones?* and I believe the wit of man cannot invent a more ridiculous queſtion. But, if Mr HUME's philoſophy be admitted, this queſtion deſerves to be treated more gravely: For if, as we learn from this philoſophy, a ſucceſſion of ideas and impreſſions may eat, and drink, and be merry, I ſee no good reaſon why a chimera, which if not the ſame, is of kin to an idea, may not chew the cud upon that kind of food, which the ſchoolmen call ſecond intentions.

3. Another firſt principle I take to be, That thoſe things did really happen which I diſtinctly remember.

This

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This has one of the ſureſt marks of a firſt principle; for no man ever pretended to prove it, and yet no man in his wits calls it in queſtion; the teſtimony of memory, like that of conſcioufneſs, is immediate; it claims our aſſent upon its own authority.

Suppoſe that a learned counſel, in defence of a client againſt the concurring teſtimony of witneſſes of credit, ſhould inſiſt upon a new topic to invalidate the teſtimony. "Admitting," ſays he, "the integrity of the witneſſes, and that they diſtinctly remember "what they have given in evidence; it does not follow that the "priſoner is guilty. It has never been proved that the moſt di- "ſtinct memory may not be fallacious. Shew me any neceſſary "connection between that act of the mind which we call memory, "and the paſt exiſtence of the event remembered. No man has "ever offered a ſhadow of argument to prove ſuch a connection; "yet this is one link of the chain of proof againſt the priſoner; "and if it have no ſtrength, the whole proof falls to the ground: "Until this, therefore, be made evident, until it can be proved, "that we may ſafely reſt upon the teſtimony of memory for the "truth of paſt events, no judge or jury can juſtly take away the "life of a citizen upon ſo doubtful a point."

I believe we may take it for granted, that this argument from a learned counſel would have no other effect upon the judge or jury, than to convince them that he was diſordered in his judgment. Counſel is allowed to plead every thing for a client that is fit to perſuade or to move; yet I believe no counſel ever had the boldneſs to plead this topic. And for what reaſon? For no other reaſon, ſurely, but becauſe it is abſurd. Now, what is abſurd at the bar, is ſo in the Philoſopher's chair. What would be ridiculous, if delivered to a jury of honeſt ſenſible citizens, is no leſs ſo when delivered gravely in a philoſophical diſſertation.

Mr HUME has not, as far as I remember, directly called in queſtion the teſtimony of memory; but he has laid down the premiſes

miſes by which its authority is overturned, leaving it to his reader to draw the concluſion.

He labours to ſhew, that the belief or aſſent which always attends the memory and ſenſes is nothing but the vivacity of thoſe perceptions which they preſent. He ſhews very clearly, that this vivacity gives no ground to believe the exiſtence of external objects. And it is obvious, that it can give as little ground to believe the paſt exiſtence of the objects of memory.

Indeed the theory concerning ideas, ſo generally received by Philoſophers, deſtroys all the authority of memory, as well as the authority of the ſenſes. DES CARTES, MALEBRANCHE, and LOCKE, were aware that this theory made it neceſſary for them to find out arguments to prove the exiſtence of external objects, which the vulgar believe upon the bare authority of their ſenſes; but thoſe Philoſophers were not aware, that this theory made it equally neceſſary for them to find arguments to prove the exiſtence of things paſt, which we remember, and to ſupport the authority of memory.

All the arguments they advanced to ſupport the authority of our ſenſes, were eaſily refuted by Biſhop BERKELEY and Mr HUME, being indeed very weak and inconcluſive. And it would have been as eaſy to anſwer every argument they could have brought, conſiſtent with their theory, to ſupport the authority of memory.

For, according to that theory, the immediate object of memory, as well as of every other operation of the underſtanding, is an idea preſent in the mind. And, from the preſent exiſtence of this idea of memory I am left to infer, by reaſoning, that ſix months, or ſix years ago, there did exiſt an object ſimilar to this idea.

But what is there in the idea that can lead me to this concluſion?

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Perhaps it will be ſaid, that this idea or image in the mind muſt have had a cauſe.

I admit, that if there is ſuch an image in the mind it muſt have had a cauſe, and a cauſe able to produce the effect; but what can we infer from its having a cauſe? Does it follow that the effect is a type, an image, a copy of its cauſe? Then it will follow, that a picture is an image of the painter, and a coach of the coach-maker.

A paſt event may be known by reaſoning, but that is not remembering it. When I remember a thing diſtinctly, I diſdain equally to hear reaſons for it or againſt it. And ſo I think does every man in his ſenſes.

4. Another firſt principle is our own perſonal identity and continued exiſtence, as far back as we remember any thing diſtinctly.

This we know immediately, and not by reaſoning. It ſeems, indeed, to be a part of the teſtimony of memory. Every thing we remember has ſuch a relation to ourſelves, as to imply neceſſarily our exiſtence at the time remembered. And there cannot be a more palpable abſurdity than that a man ſhould remember what happened before he exiſted. He muſt therefore have exiſted as far back as he remembers any thing diſtinctly, if his memory be not fallacious. This principle, therefore, is ſo connected with the laſt mentioned, that it may be doubtful whether both ought not to be included in one. Let every one judge of this as he ſees reaſon. The proper notion of identity, and the ſentiments of Mr LOCKE on this ſubject, have been conſidered before under the head of memory.

5. Another

5. Another firſt principle is, That thoſe things do really exiſt which we diſtinctly perceive by our ſenſes, and are what we perceive them to be. CHAP. V.

It is too evident to need proof, that all men are by nature led to give implicit faith to the diſtinct teſtimony of their ſenſes, long before they are capable of any bias from prejudices of education or of philoſophy.

How came we at firſt to know that there are certain beings about us whom we call father, and mother, and ſiſters, and brothers, and nurſe? Was it not by the teſtimony of our ſenſes? How did theſe perſons convey to us any information or inſtruction? Was it not by means of our ſenſes?

It is evident we can have no communication, no correſpondence or ſociety with any created being, but by means of our ſenſes. And until we rely upon their teſtimony, we muſt conſider ourſelves as being alone in the univerſe, without any fellow-creature, living or inanimate, and be left to converſe with our own thoughts.

Biſhop BERKELEY ſurely did not duly conſider, that it is by means of the material world that we have any correſpondence with thinking beings, or any knowledge of their exiſtence, and that by depriving us of the material world, he deprived us at the ſame time of family, friends, country, and every human creature; of every object of affection, eſteem or concern, except ourſelves.

The good Biſhop ſurely never intended this. He was too warm a friend, too zealous a patriot, and too good a Chriſtian, to be capable of ſuch a thought. He was not aware of the conſequences of his ſyſtem, and therefore they ought not to be imputed to him; but we muſt impute them to the ſyſtem itſelf. It ſtifles every generous and ſocial principle.

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When I conſider myſelf as ſpeaking to men who hear me, and can judge of what I ſay, I feel that reſpect which is due to ſuch an audience. I feel an enjoyment in a reciprocal communication of ſentiments with candid and ingenious friends, and my ſoul bleſſes the Author of my being, who has made me capable of this manly and rational entertainment.

But the Biſhop ſhews me, that this is all a dream; that I ſee not a human face; that all the objects I ſee, and hear, and handle, are only the ideas of my own mind; ideas are my only companions. Cold company, indeed! Every ſocial affection freezes at the thought!

But, my Lord Biſhop, are there no minds left in the univerſe but my own?

Yes, indeed; it is only the material world that is annihilated; every thing elſe remains as it was.

This ſeems to promiſe ſome comfort in my forlorn ſolitude. But do I ſee thoſe minds? No. Do I ſee their ideas? No. Nor do they ſee me or my ideas. They are then no more to me than the inhabitants of SOLOMON's iſles, or of the moon; and my melancholy ſolitude returns. Every ſocial tie is broken, and every ſocial affection is ſtifled.

This diſmal ſyſtem, which, if it could be believed, would deprive men of every ſocial comfort, a very good Biſhop, by ſtrict and accurate reaſoning, deduced from the principles commonly received by Philoſophers concerning ideas. The fault is not in the reaſoning, but in the principles from which it is drawn.

All the arguments urged by BERKELEY and HUME againſt the exiſtence of a material world are grounded upon this principle, That we do not perceive external objects themſelves, but certain images

images or ideas in our own minds. But this is no dictate of common ſenſe, but directly contrary to the ſenſe of all who have not been taught it by philoſophy.

We have before examined the reaſons given by Philoſophers, to prove that ideas, and not external objects, are the immediate objects of perception, and the inſtances given to prove the ſenſes fallacious. Without repeating what has before been ſaid upon thoſe points, we ſhall only here obſerve, that if external objects be perceived immediately, we have the ſame reaſon to believe their exiſtence as Philoſophers have to believe the exiſtence of ideas, while they hold them to be the immediate objects of perception.

6. Another firſt principle, I think, is, That we have ſome degree of power over our actions, and the determinations of our will.

All power muſt be derived from the fountain of power, and of every good gift. Upon his good pleaſure its continuance depends, and it is always ſubject to his control.

Beings to whom God has given any degree of power, and underſtanding to direct them to the proper uſe of it, muſt be accountable to their Maker. But thoſe who are intruſted with no power, can have no account to make; for all good conduct conſiſts in the right uſe of power; all bad conduct in the abuſe of it.

To call to account a being who never was intruſted with any degree of power, is an abſurdity no leſs than it would be to call to account an inanimate being. We are ſure, therefore, if we have any account to make to the Author of our being, that we muſt have ſome degree of power, which, as far as it is properly uſed, entitles us to his approbation; and, when abuſed, renders us obnoxious to his diſpleaſure.

It is not eaſy to ſay in what way we firſt get the notion or idea of

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of power. It is neither an object of ſenſe nor of conſciouſneſs. We ſee events, one ſucceeding another; but we ſee not the power by which they are produced. We are conſcious of the operations of our minds; but power is not an operation of mind. If we had no notions but ſuch as are furniſhed by the external ſenſes, and by conſciouſneſs, it ſeems to be impoſſible that we ſhould ever have any conception of power. Accordingly, Mr HUME, who has reaſoned the moſt accurately upon this hypotheſis, denies that we have any idea of power, and clearly refutes the account given by Mr LOCKE of the origin of this idea.

But it is in vain to reaſon from a hypotheſis againſt a fact, the truth of which every man may ſee by attending to his own thoughts. It is evident, that all men, very early in life, not only have an idea of power, but a conviction that they have ſome degree of it in themſelves: For this conviction is neceſſarily implied in many operations of mind, which are familiar to every man, and without which no man can act the part of a reaſonable being.

Firſt, It is implied in every act of volition. "Volition, it is "plain, ſays Mr LOCKE, is an act of the mind, knowingly exert-"ing that dominion which it takes itſelf to have over any part "of the man, by employing it in, or with-holding it from any "particular action." Every volition therefore implies a conviction of power to do the action willed. A man may deſire to make a viſit to the moon, or to the planet Jupiter; but nothing but inſanity could make him will to do ſo. And if even inſanity produced this effect, it muſt be by making him think it to be in his power.

Secondly, This conviction is implied in all deliberation; for no man in his wits deliberates whether he ſhall do what he believes not to be in his power. *Thirdly*, The ſame conviction is implied in every reſolution or purpoſe formed in conſequence of deliberation. A man may as well form a reſolution to pull the moon out of

of her ſphere, as to do the moſt inſignificant action which he believes not to be in his power. The ſame thing may be ſaid of every promiſe or contract wherein a man plights his faith; for he is not an honeſt man who promiſes what he does not believe he has power to perform.

As theſe operations imply a belief of ſome degree of power in ourſelves; ſo there are others equally common and familiar, which imply a like belief with regard to others.

When we impute to a man any action or omiſſion, as a ground of approbation or of blame, we muſt believe he had power to do otherwiſe. The ſame is implied in all advice, exhortation, command, and rebuke, and in every caſe in which we rely upon his fidelity in performing any engagement, or executing any truſt.

It is not more evident that mankind have a conviction of the exiſtence of a material world, than that they have the conviction of ſome degree of power in themſelves, and in others; every one over his own actions, and the determinations of his will: A conviction ſo early, ſo general, and ſo interwoven with the whole of human conduct, that it muſt be the natural effect of our conſtitution, and intended by the Author of our being to guide our actions.

It reſembles our conviction of the exiſtence of a material world in this reſpect alſo, that even thoſe who reject it in ſpeculation, find themſelves under a neceſſity of being governed by it in their practice; and thus it will always happen when philoſophy contradicts firſt principles.

7. Another firſt principle is, That the natural faculties, by which we diſtinguiſh truth from error, are not fallacious. If any man ſhould demand a proof of this, it is impoſſible to ſatisfy him. For ſuppoſe it ſhould be mathematically demonſtrated, this would ſignify

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nify nothing in this caſe; becauſe, to judge of a demonſtration, a man muſt truſt his faculties, and take for granted the very thing in queſtion.

If a man's honeſty were called in queſtion, it would be ridiculous to refer it to the man's own word, whether he be honeſt or not. The ſame abſurdity there is in attempting to prove, by any kind of reaſoning, probable or demonſtrative, that our reaſon is not fallacious, ſince the very point in queſtion is, whether reaſoning may be truſted.

If a Sceptic ſhould build his ſcepticiſm upon this foundation, that all our reaſoning and judging powers are fallacious in their nature, or ſhould reſolve at leaſt to with-hold aſſent until it be proved that they are not; it would be impoſſible by argument to beat him out of this ſtrong hold, and he muſt even be left to enjoy his ſcepticiſm.

DES CARTES certainly made a falſe ſtep in this matter; for having ſuggeſted this doubt among others, that whatever evidence he might have from his conſciouſneſs, his ſenſes, his memory, or his reaſon; yet poſſibly ſome malignant being had given him thoſe faculties on purpoſe to impoſe upon him; and therefore, that they are not to be truſted without a proper voucher: To remove this doubt, he endeavours to prove the being of a Deity who is no deceiver; whence he concludes, that the faculties he had given him are true and worthy to be truſted.

It is ſtrange that ſo acute a reaſoner did not perceive, that in this reaſoning there is evidently a begging of the queſtion.

For if our faculties be fallacious, why may they not deceive us in this reaſoning as well as in others? And if they are to be truſted in this inſtance without a voucher, why not in others?

Every

Every kind of reaſoning for the veracity of our faculties, amounts to no more than taking their own teſtimony for their veracity; and this we muſt do implicitly, until God give us new faculties to ſit in judgment upon the old; and the reaſon why DES CARTES ſatisfied himſelf with ſo weak an argument for the truth of his faculties, moſt probably was, that he never ſeriouſly doubted of it.

If any truth can be ſaid to be prior to all others in the order of nature, this ſeems to have the beſt claim; becauſe in every inſtance of aſſent, whether upon intuitive, demonſtrative, or probable evidence, the truth of our faculties is taken for granted, and is, as it were, one of the premiſes on which our aſſent is grounded.

How then come we to be aſſured of this fundamental truth on which all others reſt? Perhaps evidence, as in many other reſpects it reſembles light, ſo in this alſo, that as light, which is the diſcoverer of all viſible objects, diſcovers itſelf at the ſame time; ſo evidence, which is the voucher for all truth, vouches for itſelf at the ſame time.

This, however, is certain, that ſuch is the conſtitution of the human mind, that evidence diſcerned by us, forces a correſponding degree of aſſent. And a man who perfectly underſtood a juſt ſyllogiſm, without believing that the concluſion follows from the premiſes, would be a greater monſter than a man born without hands or feet.

We are born under a neceſſity of truſting to our reaſoning and judging powers; and a real belief of their being fallacious cannot be maintained for any conſiderable time by the greateſt Sceptic, becauſe it is doing violence to our conſtitution. It is like a man's walking upon his hands, a feat which ſome men upon occaſion can exhibit; but no man ever made a long journey in this manner. Ceaſe to admire his dexterity, and he will, like other men, betake himſelf to his legs.

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We may here take notice of a property of the principle under conſideration, that ſeems to be common to it with many other firſt principles, and which can hardly be found in any principle that is built ſolely upon reaſoning; and that is, that in moſt men it produces its effect without ever being attended to, or made an object of thought. No man ever thinks of this principle, unleſs when he conſiders the grounds of ſcepticiſm; yet it invariably governs his opinions. When a man in the common courſe of life gives credit to the teſtimony of his ſenſes, his memory, or his reaſon, he does not put the queſtion to himſelf, whether theſe faculties may deceive him; yet the truſt he repoſes in them ſuppoſes an inward conviction, that, in that inſtance at leaſt, they do not deceive him.

It is another property of this and of many firſt principles, that they force aſſent in particular inſtances, more powerfully than when they are turned into a general propoſition. Many Sceptics have denied every general principle of ſcience, excepting perhaps the exiſtence of our preſent thoughts; yet theſe men reaſon, and refute, and prove, they aſſent and diſſent in particular caſes. They uſe reaſoning to overturn all reaſoning, and judge that they ought to have no judgment, and ſee clearly that they are blind. Many have in general maintained that the ſenſes are fallacious, yet there never was found a man ſo ſceptical as not to truſt his ſenſes in particular inſtances when his ſafety required it; and it may be obſerved of thoſe who have profeſſed ſcepticiſm, that their ſcepticiſm lies in generals, while in particulars they are no leſs dogmatical than others.

8. Another firſt principle relating to exiſtence, is, That there is life and intelligence in our fellow-men with whom we converſe.

As ſoon as children are capable of aſking a queſtion, or of anſwering a queſtion, as ſoon as they ſhew the ſigns of love, of reſentment, or of any other affection, they muſt be convinced, that thoſe with whom they have this intercourſe are intelligent beings.

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It is evident they are capable of ſuch intercourſe long before they can reaſon. Every one knows, that there is a ſocial intercourſe between the nurſe and the child before it is a year old. It can, at that age, underſtand many things that are ſaid to it.

It can by ſigns aſk and refuſe, threaten and ſupplicate. It clings to its nurſe in danger, enters into her grief and joy, is happy in her ſoothing and careſſes, and unhappy in her diſpleaſure: That theſe things cannot be without a conviction in the child that the nurſe is an intelligent being, I think muſt be granted.

Now I would aſk how a child of a year old comes by this conviction? Not by reaſoning ſurely, for children do not reaſon at that age. Nor is it by external ſenſes, for life and intelligence are not objects of the external ſenſes.

By what means, or upon what occaſions Nature firſt gives this information to the infant mind, is not eaſy to determine. We are not capable of reflecting upon our own thoughts at that period of life, and before we attain this capacity, we have quite forgot how or on what occaſion we firſt had this belief; we perceive it in thoſe who are born blind, and in others who are born deaf; and therefore Nature has not connected it ſolely either with any object of ſight, or with any object of hearing. When we grow up to the years of reaſon and reflection, this belief remains. No man thinks of aſking himſelf what reaſon he has to believe that his neighbour is a living creature. He would be not a little ſurpriſed if another perſon ſhould aſk him ſo abſurd a queſtion; and perhaps could not give any reaſon which would not equally prove a watch or a puppet to be a living creature.

But, though you ſhould ſatisfy him of the weakneſs of the reaſons he gives for his belief, you cannot make him in the leaſt doubtful. This belief ſtands upon another foundation than that of reaſoning; and therefore, whether a man can give good reaſons for it or not, it is not in his power to ſhake it off.

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Setting aſide this natural conviction, I believe the beſt reaſon we can give, to prove that other men are living and intelligent, is, that their words and actions indicate like powers of underſtanding as we are conſcious of in ourſelves. The very ſame argument applied to the works of nature, leads us to conclude, that there is an intelligent Author of nature, and appears equally ſtrong and obvious in the laſt caſe as in the firſt; ſo that it may be doubted whether men, by the mere exerciſe of reaſoning, might not as ſoon diſcover the exiſtence of a Deity, as that other men have life and intelligence.

The knowledge of the laſt is abſolutely neceſſary to our receiving any improvement by means of inſtruction and example; and, without theſe means of improvement, there is no ground to think that we ſhould ever be able to acquire the uſe of our reaſoning powers. This knowledge, therefore, muſt be antecedent to reaſoning, and therefore muſt be a firſt principle.

It cannot be ſaid, that the judgments we form concerning life and intelligence in other beings are at firſt free from error: But the errors of children in this matter lie on the ſafe ſide; they are prone to attribute intelligence to things inanimate. Theſe errors are of ſmall conſequence, and are gradually corrected by experience and ripe judgment. But the belief of life and intelligence in other men, is abſolutely neceſſary for us before we are capable of reaſoning; and therefore the Author of our being hath given us this belief antecedently to all reaſoning.

9. Another firſt principle I take to be, That certain features of the countenance, ſounds of the voice, and geſtures of the body, indicate certain thoughts and diſpoſitions of mind.

That many operations of the mind have their natural ſigns in the countenance, voice, and geſture, I ſuppoſe every man will admit. *Omnis enim motus animi*, ſays CICERO, *ſuum quemdam habet a natura*

natura vultum, et vocem et geſtum. The only queſtion is, whether we underſtand the ſignification of thoſe ſigns, by the conſtitution of our nature, by a kind of natural perception ſimilar to the perceptions of ſenſe; or whether we gradually learn the ſignification of ſuch ſigns from experience, as we learn that ſmoke is a ſign of fire, or that the freezing of water is a ſign of cold? I take the firſt to be the truth.

It ſeems to me incredible, that the notions men have of the expreſſion of features, voice, and geſture, are entirely the fruit of experience. Children, almoſt as ſoon as born, may be frighted, and thrown into fits by a threatening or angry tone of voice. I knew a man who could make an infant cry, by whiſtling a melancholy tune in the ſame or in the next room; and again, by altering his key, and the ſtrain of his muſic, could make the child leap and dance for joy.

It is not by experience ſurely that we learn the expreſſion of muſic; for its operation is commonly ſtrongeſt the firſt time we hear it. One air expreſſes mirth and feſtivity; ſo that, when we hear it, it is with difficulty we can forbear to dance. Another is ſorrowful and ſolemn. One inſpires with tenderneſs and love; another with rage and fury.

> Hear how TIMOTHEUS' vary'd lays ſurpriſe,
> And bid alternate paſſions fall and riſe;
> While at each change, the ſon of Lybian Jove
> Now burns with glory, and then melts with love.
> Now his fierce eyes with ſparkling fury glow,
> Now ſighs ſteal out, and tears begin to flow.
> Perſians and Greeks, like turns of Nature, found,
> And the world's victor ſtood ſubdu'd by ſound.

It is not neceſſary that a man have ſtudied either muſic or the paſſions, in order to his feeling theſe effects. The moſt ignorant and unimproved,

CHAP. V. unimproved, to whom Nature has given a good ear, feel them as ſtrongly as the moſt knowing.

The countenance and geſture have an expreſſion no leſs ſtrong and natural than the voice. The firſt time one ſees a ſtern and fierce look, a contracted brow, and a menacing poſture, he concludes that the perſon is inflamed with anger. Shall we ſay, that, previous to experience, the moſt hoſtile countenance has as agreeable an appearance as the moſt gentle and benign? This ſurely would contradict all experience; for we know that an angry countenance will fright a child in the cradle. Who has not obſerved, that children, very early, are able to diſtinguiſh what is ſaid to them in jeſt from what is ſaid in earneſt, by the tone of the voice, and the features of the face? They judge by theſe natural ſigns, even when they ſeem to contradict the artificial.

If it were by experience that we learn the meaning of features, and ſound, and geſture, it might be expected that we ſhould recollect the time when we firſt learned thoſe leſſons, or, at leaſt, ſome of ſuch a multitude.

Thoſe who give attention to the operations of children, can eaſily diſcover the time when they have their earlieſt notices from experience, ſuch as that flame will burn, or that knives will cut. But no man is able to recollect in himſelf, or to obſerve in others, the time when the expreſſion of the face, voice, and geſture, were learned.

Nay, I apprehend that it is impoſſible that this ſhould be learned from experience.

When we ſee the ſign, and ſee the thing ſignified always conjoined with it, experience may be the inſtructor, and teach us how that ſign is to be interpreted. But how ſhall experience inſtruct us when we ſee the ſign only, when the thing ſignified is inviſible?

inviſible? Now this is the caſe here; the thoughts and paſſions of the mind, as well as the mind itſelf, are inviſible, and therefore their connection with any ſenſible ſign cannot be firſt diſcovered by experience; there muſt be ſome earlier ſource of this knowledge.

Nature ſeems to have given to men a faculty or ſenſe, by which this connection is perceived. And the operation of this ſenſe is very analogous to that of the external ſenſes.

When I graſp an ivory ball in my hand, I feel a certain ſenſation of touch. In the ſenſation, there is nothing external, nothing corporeal. The ſenſation is neither round nor hard; it is an act of feeling of the mind, from which I cannot, by reaſoning, infer the exiſtence of any body. But, by the conſtitution of my nature, the ſenſation carries along with it the conception and belief of a round hard body really exiſting in my hand.

In like manner, when I ſee the features of an expreſſive face, I ſee only figure and colour variouſly modified. But, by the conſtitution of my nature, the viſible object brings along with it the conception and belief of a certain paſſion or ſentiment in the mind of the perſon.

In the former caſe, a ſenſation of touch is the ſign, and the hardneſs and roundneſs of the body I graſp is ſignified by that ſenſation. In the latter caſe, the features of the perſon is the ſign, and the paſſion or ſentiment is ſignified by it.

The power of natural ſigns, to ſignify the ſentiments and paſſions of the mind, is ſeen in the ſigns of dumb perſons, who can make themſelves to be underſtood in a conſiderable degree, even by thoſe who are wholly unexperienced in that language.

It is ſeen in the traffic which has been frequently carried on between people that have no common acquired language. They can buy

CHAP. V. buy and ſell, and aſk and refuſe, and ſhew a friendly or hoſtile diſpoſition by natural ſigns.

It was ſeen ſtill more in the actors among the ancients who performed the geſticulation upon the ſtage, while others recited the words. To ſuch a pitch was this art carried, that we are told CICERO and ROSCIUS uſed to contend whether the orator could expreſs any thing by words, which the actor could not expreſs in dumb ſhow by geſticulation; and whether the ſame ſentence or thought could not be acted in all the variety of ways in which the orator could expreſs it in words.

But the moſt ſurpriſing exhibition of this kind, was that of the pantomimes among the Romans, who acted plays, or ſcenes of plays, without any recitation, and yet could be perfectly underſtood.

And here it deſerves our notice, that although it required much ſtudy and practice in the pantomimes to excel in their art; yet it required neither ſtudy nor practice in the ſpectators to underſtand them. It was a natural language, and therefore underſtood by all men, whether Romans, Greeks, or Barbarians, by the learned and the unlearned.

LUCIAN relates, that a King, whoſe dominions bordered upon the Euxine ſea, happening to be at Rome in the reign of NERO, and having ſeen a pantomime act, begged him of NERO that he might uſe him in his intercourſe with all the nations in his neighbourhood: For, ſaid he, I am obliged to employ I don't know how many interpreters, in order to keep a correſpondence with neighbours who ſpeak many languages, and do not underſtand mine; but this fellow will make them all underſtand him.

For theſe reaſons, I conceive, it muſt be granted, not only that there is a connection eſtabliſhed by Nature between certain ſigns in

in the countenance, voice, and geſture, and the thoughts and paſſions of the mind; but alſo, that, by our conſtitution, we underſtand the meaning of thoſe ſigns, and from the ſign conclude the exiſtence of the thing ſignified.

10. Another firſt principle appears to me to be, That there is a certain regard due to human teſtimony in matters of fact, and even to human authority in matters of opinion.

Before we are capable of reaſoning about teſtimony or authority, there are many things which it concerns us to know, for which we can have no other evidence. The wiſe Author of nature hath planted in the human mind a propenſity to rely upon this evidence before we can give a reaſon for doing ſo. This, indeed, puts our judgment almoſt entirely in the power of thoſe who are about us, in the firſt period of life; but this is neceſſary both to our preſervation and to our improvement. If children were ſo framed, as to pay no regard to teſtimony or to authority, they muſt, in the literal ſenſe, periſh for lack of knowledge. It is not more neceſſary that they ſhould be fed before they can feed themſelves, than that they ſhould be inſtructed in many things, before they can diſcover them by their own judgment.

But when our faculties ripen, we find reaſon to check that propenſity to yield to teſtimony and to authority, which was ſo neceſſary and ſo natural in the firſt period of life. We learn to reaſon about the regard due to them, and ſee it to be a childiſh weakneſs to lay more ſtreſs upon them than reaſon juſtifies. Yet, I believe, to the end of life, moſt men are more apt to go into this extreme than into the contrary; and the natural propenſity ſtill retains ſome force.

The natural principles, by which our judgments and opinions are regulated before we come to the uſe of reaſon, ſeem to be no leſs neceſſary to ſuch a being as man, than thoſe natural inſtincts

CHAP. V. which the Author of nature hath given us to regulate our actions during that period.

11. There are many events depending upon the will of man, in which there is a ſelf-evident probability, greater or leſs, according to circumſtances.

There may be in ſome individuals ſuch a degree of phrenzy and madneſs, that no man can ſay what they may or may not do. Such perſons we find it neceſſary to put under reſtraint, that as far as poſſible they may be kept from doing harm to themſelves or to others. They are not conſidered as reaſonable creatures, or members of ſociety. But, as to men who have a ſound mind, we depend upon a certain degree of regularity in their conduct; and could put a thouſand different caſes, wherein we could venture, ten to one, that they will act in ſuch a way, and not in the contrary.

If we had no confidence in our fellow men that they will act ſuch a part in ſuch circumſtances, it would be impoſſible to live in ſociety with them: For that which makes men capable of living in ſociety, and uniting in a political body under government, is, that their actions will always be regulated in a great meaſure by the common principles of human nature.

It may always be expected, that they will regard their own intereſt and reputation, and that of their families and friends; that they will repel injuries, and have ſome ſenſe of good offices; and that they will have ſome regard to truth and juſtice, ſo far at leaſt as not to ſwerve from them without temptation.

It is upon ſuch principles as theſe, that all political reaſoning is grounded. Such reaſoning is never demonſtrative; but it may have a very great degree of probability, eſpecially when applied to great bodies of men.

12. The

12. The laſt principle of contingent truths I mention, is, That, in the phænomena of nature, what is to be, will probably be like to what has been in ſimilar circumſtances.

We muſt have this conviction as ſoon as we are capable of learning any thing from experience; for all experience is grounded upon a belief that the future will be like the paſt. Take away this principle, and the experience of an hundred years makes us no wiſer with regard to what is to come.

This is one of thoſe principles, which, when we grow up and obſerve the courſe of nature, we can confirm by reaſoning. We perceive that Nature is governed by fixed laws, and that if it were not ſo, there could be no ſuch thing as prudence in human conduct; there would be no fitneſs in any means to promote an end; and what, on one occaſion, promoted it, might as probably, on another occaſion, obſtruct it.

But the principle is neceſſary for us before we are able to diſcover it by reaſoning, and therefore is made a part of our conſtitution, and produces its effects before the uſe of reaſon.

This principle remains in all its force when we come to the uſe of reaſon; but we learn to be more cautious in the application of it. We obſerve more carefully the circumſtances on which the paſt event depended, and learn to diſtinguiſh them from thoſe which were accidentally conjoined with it.

In order to this, a number of experiments, varied in their circumſtances, is often neceſſary. Sometimes a ſingle experiment is thought ſufficient to eſtabliſh a general concluſion. Thus, when it was once found, that, in a certain degree of cold, quickſilver became a hard and malleable metal, there was good reaſon to think, that the ſame degree of cold will always produce this effect to the end of the world.

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I need hardly mention, that the whole fabric of natural philoſophy is built upon this principle, and, if it be taken away, muſt tumble down to the foundation.

Therefore the great NEWTON lays it down as an axiom, or as one of his laws of philoſophiſing, in theſe words, *Effectuum naturalium ejuſdem generis eaſdem eſſe cauſas.* This is what every man aſſents to as ſoon as he underſtands it, and no man aſks a reaſon for it. It has therefore the moſt genuine marks of a firſt principle.

It is very remarkable, that although all our expectation of what is to happen in the courſe of nature is derived from the belief of this principle, yet no man thinks of aſking what is the ground of this belief.

Mr HUME, I think, was the firſt who put this queſtion; and he has ſhewn clearly and invincibly, that it is neither grounded upon reaſoning, nor has that kind of intuitive evidence which mathematical axioms have. It is not a neceſſary truth.

He has endeavoured to account for it upon his own principles. It is not my buſineſs at preſent to examine the account he has given of this univerſal belief of mankind; becauſe, whether his account of it be juſt or not, (and I think it is not), yet, as this belief is univerſal among mankind, and is not grounded upon any antecedent reaſoning, but upon the conſtitution of the mind itſelf, it muſt be acknowledged to be a firſt principle, in the ſenſe in which I uſe that word.

I do not at all affirm, that thoſe I have mentioned are all the firſt principles from which we may reaſon concerning contingent truths. Such enumerations, even when made after much reflection, are ſeldom perfect.

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CHAP. VI.

First Principles of neceſſary Truths.

ABOUT moſt of the firſt principles of neceſſary truths there has been no diſpute, and therefore it is the leſs neceſſary to dwell upon them. It will be ſufficient to divide them into different claſſes; to mention ſome, by way of ſpecimen, in each claſs; and to make ſome remarks on thoſe of which the truth has been called in queſtion.

They may, I think, moſt properly be divided according to the ſciences to which they belong.

1. There are ſome firſt principles that may be called grammatical; ſuch as, that every adjective in a ſentence muſt belong to ſome ſubſtantive expreſſed or underſtood; that every complete ſentence muſt have a verb.

Thoſe who have attended to the ſtructure of language, and formed diſtinct notions of the nature and uſe of the various parts of ſpeech, perceive, without reaſoning, that theſe, and many other ſuch principles, are neceſſarily true.

2. There are logical axioms; ſuch as, that any contexture of words which does not make a propoſition, is neither true nor falſe; that every propoſition is either true or falſe; that no propoſition can be both true and falſe at the ſame time; that reaſoning in a circle proves nothing; that whatever may be truly affirmed of a genus, may be truly affirmed of all the ſpecies, and all the individuals belonging to that genus.

3. Every

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3. Every one knows there are mathematical axioms. Mathematicians have, from the days of EUCLID, very wiſely laid down the axioms or firſt principles on which they reaſon. And the effect which this appears to have had upon the ſtability and happy progreſs of this ſcience, gives no ſmall encouragement to attempt to lay the foundation of other ſciences in a ſimilar manner, as far as we are able.

Mr HUME hath diſcovered, as he apprehends, a weak ſide, even in mathematical axioms; and thinks, that it is not ſtrictly true, for inſtance, that two right lines can cut one another in one point only.

The principle he reaſons from is, That every ſimple idea is a copy of a preceding impreſſion; and therefore, in its preciſion and accuracy, can never go beyond its original. From which he reaſons in this manner: No man ever ſaw or felt a line ſo ſtraight, that it might not cut another, equally ſtraight, in two or more points. Therefore there can be no idea of ſuch a line.

The ideas that are moſt eſſential to geometry, ſuch as, thoſe of equality, of a ſtraight line, and of a ſquare ſurface, are far, he ſays, from being diſtinct and determinate; and the definitions deſtroy the pretended demonſtrations. Thus, mathematical demonſtration is found to be a rope of ſand.

I agree with this acute author, that, if we could form no notion of points, lines, and ſurfaces, more accurate than thoſe we ſee and handle, there could be no mathematical demonſtration.

But every man that has underſtanding, by analyſing, by abſtracting, and compounding the rude materials exhibited by his ſenſes, can fabricate, in his own mind, thoſe elegant and accurate forms of mathematical lines, ſurfaces, and ſolids.

If

If a man finds himſelf incapable of forming a preciſe and determinate notion of the figure which Mathematicians call a cube, he not only is no Mathematician, but is incapable of being one. But, if he has a preciſe and determinate notion of that figure, he muſt perceive, that it is terminated by ſix mathematical ſurfaces, perfectly ſquare, and perfectly equal. He muſt perceive, that theſe ſurfaces are terminated by twelve mathematical lines, perfectly ſtraight, and perfectly equal, and that thoſe lines are terminated by eight mathematical points.

When a man is conſcious of having theſe conceptions diſtinct and determinate, as every Mathematician is, it is in vain to bring metaphyſical arguments to convince him that they are not diſtinct. You may as well bring arguments to convince a man racked with pain, that he feels no pain.

Every theory that is inconſiſtent with our having accurate notions of mathematical lines, ſurfaces, and ſolids, muſt be falſe. Therefore it follows, that they are not copies of our impreſſions.

The Medicean Venus is not a copy of the block of marble from which it was made. It is true, that the elegant ſtatue was formed out of the rude block, and that too by a manual operation, which, in a literal ſenſe, we may call abſtraction. Mathematical notions are formed in the underſtanding by an abſtraction of another kind, out of the rude perceptions of our ſenſes.

As the truths of natural philoſophy are not neceſſary truths, but contingent, depending upon the will of the Maker of the world, the principles from which they are deduced muſt be of the ſame nature, and therefore belong not to this claſs.

4. I think there are axioms, even in matters of taſte. Notwithſtanding the variety found among men, in taſte, there are, I apprehend, ſome common principles, even in matters of this kind. I never

CHAP. VI. never heard of any man who thought it a beauty in a human face to want a noſe, or an eye, or to have the mouth on one ſide. How many ages have paſſed ſince the days of HOMER! Yet, in this long tract of ages, there never was found a man who took THERSITES for a beauty.

The *fine arts* are very properly called the *arts of taſte*, becauſe the principles of both are the ſame; and in the fine arts, we find no leſs agreement among thoſe who practiſe them than among other artiſts.

No work of taſte can be either reliſhed or underſtood by thoſe who do not agree with the author in the principles of taſte.

HOMER, and VIRGIL, and SHAKESPEARE, and MILTON, had the ſame taſte; and all men who have been acquainted with their writings, and agree in the admiration of them, muſt have the ſame taſte.

The fundamental rules of poetry and muſic and painting, and dramatic action and eloquence, have been always the ſame, and will be ſo to the end of the world.

The variety we find among men in matters of taſte is eaſily accounted for, conſiſtently with what we have advanced.

There is a taſte that is acquired, and a taſte that is natural. This holds with reſpect both to the external ſenſe of taſte and the internal. Habit and faſhion have a powerful influence upon both.

Of taſtes that are natural, there are ſome that may be called rational, others that are merely animal.

Children are delighted with brilliant and gaudy colours, with romping and noiſy mirth, with feats of agility, ſtrength, or cunning; and ſavages have much the ſame taſte as children.

But

But there are taſtes that are more intellectual. It is the dictate of our rational nature, that love and admiration are miſplaced when there is no intrinſic worth in the object.

In thoſe operations of taſte which are rational, we judge of the real worth and excellence of the object, and our love or admiration is guided by that judgment. In ſuch operations there is judgment as well as feeling, and the feeling depends upon the judgment we form of the object.

I do not maintain that taſte, ſo far as it is acquired, or ſo far as it is merely animal, can be reduced to principles. But as far as it is founded on judgment, it certainly may.

The virtues, the graces, the muſes, have a beauty that is intrinſic. It lies not in the feelings of the ſpectator, but in the real excellence of the object. If we do not perceive their beauty, it is owing to the defect or to the perverſion of our faculties.

And as there is an original beauty in certain moral and intellectual qualities, ſo there is a borrowed and derived beauty in the natural ſigns and expreſſions of ſuch qualities.

The features of the human face, the modulations of the voice, and the proportions, attitudes, and geſture of the body, are all natural expreſſions of good or bad qualities of the perſon, and derive a beauty or a deformity from the qualities which they expreſs.

Works of art expreſs ſome quality of the artiſt, and often derive an additional beauty from their utility or fitneſs for their end.

Of ſuch things there are ſome that ought to pleaſe, and others that ought to diſpleaſe. If they do not, it is owing to ſome defect in the ſpectator. But what has real excellence will always pleaſe thoſe who have a correct judgment and a ſound heart.

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The ſum of what has been ſaid upon this ſubject is, that, ſetting aſide the taſtes which men acquire by habit and faſhion, there is a natural taſte, which is partly animal, and partly rational. With regard to the firſt, all we can ſay is, that the Author of Nature, for wiſe reaſons, has formed us ſo as to receive pleaſure from the contemplation of certain objects, and diſguſt from others, before we are capable of perceiving any real excellence in one, or defect in the other. But that taſte which we may call rational, is that part of our conſtitution by which we are made to receive pleaſure from the contemplation of what we conceive to be excellent in its kind, the pleaſure being annexed to this judgment, and regulated by it. This taſte may be true or falſe, according as it is founded on a true or falſe judgment. And if it may be true or falſe, it muſt have firſt principles.

5. There are alſo firſt principles in morals.

That an unjuſt action has more demerit than an ungenerous one: That a generous action has more merit than a merely juſt one: That no man ought to be blamed for what it was not in his power to hinder: That we ought not to do to others what we would think unjuſt or unfair to be done to us in like circumſtances: Theſe are moral axioms, and many others might be named which appear to me to have no leſs evidence than thoſe of mathematics.

Some perhaps may think, that our determinations, either in matters of taſte or in morals, ought not to be accounted neceſſary truths: That they are grounded upon the conſtitution of that faculty which we call taſte, and of that which we call the moral ſenſe or conſcience; which faculties might have been ſo conſtituted as to have given determinations different, or even contrary to thoſe they now give: That as there is nothing ſweet or bitter in itſelf, but according as it agrees or diſagrees with the external ſenſe called taſte; ſo there is nothing beautiful or ugly in itſelf, but

but according as it agrees or diſagrees with the internal ſenſe, which we alſo call taſte; and nothing morally good or ill in itſelf, but according as it agrees or diſagrees with our moral ſenſe.

This indeed is a ſyſtem, with regard to morals and taſte, which hath been ſupported in modern times by great authorities. And if this ſyſtem be true, the conſequence muſt be, that there can be no principles, either of taſte or of morals, that are neceſſary truths. For, according to this ſyſtem, all our determinations, both with regard to matters of taſte, and with regard to morals, are reduced to matters of fact. I mean to ſuch as theſe, that by our conſtitution we have on ſuch occaſion certain agreeable feelings, and on other occaſions certain diſagreeable feelings.

But I cannot help being of a contrary opinion, being perſuaded, that a man who determined that polite behaviour has great deformity, and that there is great beauty in rudeneſs and ill breeding, would judge wrong whatever his feelings were.

In like manner, I cannot help thinking, that a man who determined that there is more moral worth in cruelty, perfidy, and injuſtice, than in generoſity, juſtice, prudence, and temperance, would judge wrong whatever his conſtitution was.

And if it be true that there is judgment in our determinations of taſte and of morals, it muſt be granted, that what is true or falſe in morals, or in matters of taſte, is neceſſarily ſo. For this reaſon, I have ranked the firſt principles of morals and of taſte under the claſs of neceſſary truths.

6. The laſt claſs of firſt principles I ſhall mention, we may call metaphyſical.

I ſhall particularly conſider three of theſe, becauſe they have been called in queſtion by Mr HUME.

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The *firſt* is, That the qualities which we perceive by our ſenſes muſt have a ſubject, which we call body, and that the thoughts we are conſcious of muſt have a ſubject, which we call mind.

It is not more evident that two and two make four, than it is that figure cannot exiſt, unleſs there be ſomething that is figured, nor motion without ſomething that is moved. I not only perceive figure and motion, but I perceive them to be qualities: They have a neceſſary relation to ſomething in which they exiſt as their ſubject. The difficulty which ſome Philoſophers have found in admitting this, is entirely owing to the theory of ideas. A ſubject of the ſenſible qualities which we perceive by our ſenſes, is not an idea either of ſenſation or of conſciouſneſs; therefore ſay they, we have no ſuch idea. Or, in the ſtyle of Mr HUME, from what impreſſion is the idea of ſubſtance derived? It is not a copy of any impreſſion; therefore there is no ſuch idea.

The diſtinction between ſenſible qualities, and the ſubſtance to which they belong, and between thought, and the mind that thinks, is not the invention of Philoſophers; it is found in the ſtructure of all languages, and therefore muſt be common to all men who ſpeak with underſtanding. And I believe no man, however ſceptical he may be in ſpeculation, can talk on the common affairs of life for half an hour, without ſaying things that imply his belief of the reality of theſe diſtinctions.

Mr LOCKE acknowledges, "That we cannot conceive how "ſimple ideas of ſenſible qualities ſhould ſubſiſt alone; and there-"fore we ſuppoſe them to exiſt in, and to be ſupported by, ſome "common ſubject." In his Eſſay, indeed, ſome of his expreſſions ſeem to leave it dubious, whether this belief, that ſenſible qualities muſt have a ſubject, be a true judgment, or a vulgar prejudice. But in his firſt letter to the Biſhop of WORCESTER, he removes this doubt, and quotes many paſſages of his Eſſay, to ſhew that he neither denied, nor doubted of the exiſtence of ſubſtances, both thinking

thinking and material; and that he believed their exiſtence on the ſame ground the Biſhop did, to wit, " on the repugnancy to our " conceptions, that modes and accidents ſhould ſubſiſt by themſelves." He offers no proof of this repugnancy; nor, I think, can any proof of it be given, becauſe it is a firſt principle.

It were to be wiſhed that Mr LOCKE, who enquired ſo accurately and ſo laudably into the origin, certainty, and extent of human knowledge, had turned his attention more particularly to the origin of theſe two opinions which he firmly believed; to wit, that ſenſible qualities muſt have a ſubject which we call body, and that thought muſt have a ſubject which we call mind. A due attention to theſe two opinions which govern the belief of all men, even of Sceptics in the practice of life, would probably have led him to perceive, that ſenſation and conſciouſneſs are not the only ſources of human knowledge; and that there are principles of belief in human nature, of which we can give no other account but that they neceſſarily reſult from the conſtitution of our faculties; and that if it were in our power to throw off their influence upon our practice and conduct, we could neither ſpeak nor act like reaſonable men.

We cannot give a reaſon why we believe even our ſenſations to be real and not fallacious; why we believe what we are conſcious of; why we truſt any of our natural faculties. We ſay, it muſt be ſo, it cannot be otherwiſe. This expreſſes only a ſtrong belief, which is indeed the voice of Nature, and which therefore in vain we attempt to reſiſt. But if, in ſpite of Nature, we reſolve to go deeper, and not to truſt our faculties, without a reaſon to ſhew that they cannot be fallacious, I am afraid, that ſeeking to become wiſe, and to be as gods, we ſhall become fooliſh, and being unſatisfied with the lot of humanity, we ſhall throw off common ſenſe.

The *ſecond* metaphyſical principle I mention is, That whatever begins to exiſt, muſt have a cauſe which produced it.

Philoſophy

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Philoſophy is indebted to Mr HUME in this reſpect among others, that, by calling in queſtion many of the firſt principles of human knowledge, he hath put ſpeculative men upon enquiring more carefully than was done before, into the nature of the evidence upon which they reſt. Truth can never ſuffer by a fair enquiry; it can bear to be ſeen naked and in the fulleſt light; and the ſtricteſt examination will always turn out in the iſſue to its advantage. I believe Mr HUME was the firſt who ever called in queſtion whether things that begin to exiſt muſt have a cauſe.

With regard to this point, we muſt hold one of theſe three things, either that it is an opinion, for which we have no evidence, and which men have fooliſhly taken up without ground; or, *ſecondly*, That it is capable of direct proof by argument; or, *thirdly*, That it is ſelf-evident, and needs no proof, but ought to be received as an axiom, which cannot by reaſonable men be called in queſtion.

The firſt of theſe ſuppoſitions would put an end to all philoſophy, to all religion, to all reaſoning that would carry us beyond the objects of ſenſe, and to all prudence in the conduct of life.

As to the ſecond ſuppoſition, that this principle may be proved by direct reaſoning, I am afraid we ſhall find the proof extremely difficult, if not altogether impoſſible.

I know only of three or four arguments that have been urged by Philoſophers, in the way of abſtract reaſoning, to prove, that things which begin to exiſt muſt have a cauſe.

One is offered by Mr HOBBES, another by Dr SAMUEL CLARKE, another by Mr LOCKE. Mr HUME, in his Treatiſe of Human Nature, has examined them all; and, in my opinion, has ſhewn, that they take for granted the thing to be proved; a kind of falſe reaſoning, which men are very apt to fall into when they attempt to prove what is ſelf-evident.

It

It has been thought, that, although this principle does not admit of proof from abſtract reaſoning, it may be proved from experience, and may be juſtly drawn by induction, from inſtances that fall within our obſervation.

I conceive this method of proof will leave us in great uncertainty, for theſe three reaſons:

1ſt, Becauſe the propoſition to be proved is not a contingent but a neceſſary propoſition. It is not, that things which begin to exiſt commonly have a cauſe, or even that they always in fact have a cauſe; but that they muſt have a cauſe, and cannot begin to exiſt without a cauſe.

Propoſitions of this kind, from their nature, are incapable of proof by induction. Experience informs us only of what is or has been, not of what muſt be; and the concluſion muſt be of the ſame nature with the premiſes.

For this reaſon, no mathematical propoſition can be proved by induction. Though it ſhould be found by experience in a thouſand caſes, that the area of a plane triangle is equal to the rectangle under the altitude and half the baſe, this would not prove that it muſt be ſo in all caſes, and cannot be otherwiſe; which is what the Mathematician affirms.

In like manner, though we had the moſt ample experimental proof, that things which have begun to exiſt had a cauſe, this would not prove that they muſt have a cauſe. Experience may ſhew us what is the eſtabliſhed courſe of nature, but can never ſhew what connections of things are in their nature neceſſary.

2dly, General maxims, grounded on experience, have only a degree of probability proportioned to the extent of our experience, and ought always to be underſtood ſo as to leave room for exceptions, if future experience ſhall diſcover any ſuch.

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The law of gravitation has as full a proof from experience and induction as any principle can be ſuppoſed to have. Yet, if any Philoſopher ſhould, by clear experiment, ſhew that there is a kind of matter in ſome bodies which does not gravitate, the law of gravitation ought to be limited by that exception.

Now it is evident, that men have never conſidered the principle of the neceſſity of cauſes, as a truth of this kind which may admit of limitation or exception; and therefore it has not been received upon this kind of evidence.

3*dly*, I do not ſee that experience could ſatisfy us that every change in nature actually has a cauſe.

In the far greateſt part of the changes in nature that fall within our obſervation, the cauſes are unknown; and therefore, from experience, we cannot know whether they have cauſes or not.

Cauſation is not an object of ſenſe. The only experience we can have of it, is in the conſciouſneſs we have of exerting ſome power in ordering our thoughts and actions. But this experience is ſurely too narrow a foundation for a general concluſion, that all things that have had or ſhall have a beginning muſt have a cauſe.

For theſe reaſons, this principle cannot be drawn from experience any more than from abſtract reaſoning.

The *third* ſuppoſition is, That it is to be admitted as a firſt or ſelf-evident principle. Two reaſons may be urged for this.

1*ſt*, The univerſal conſent of mankind, not of Philoſophers only, but of the rude and unlearned vulgar.

Mr HUME, as far as I know, was the firſt that ever expreſſed any doubt of this principle. And when we conſider that he has rejected

rejected every principle of human knowledge, excepting that of conſciouſneſs, and has not even ſpared the axioms of mathematics, his authority is of ſmall weight.

Indeed, with regard to firſt principles, there is no reaſon why the opinion of a Philoſopher ſhould have more authority than that of another man of common ſenſe, who has been accuſtomed to judge in ſuch caſes. The illiterate vulgar are competent judges; and the Philoſopher has no prerogative in matters of this kind; but he is more liable than they to be miſled by a favourite ſyſtem, eſpecially if it is his own.

Setting aſide the authority of Mr HUME, what has philoſophy been employed in, ſince men firſt began to philoſophiſe, but in the inveſtigation of the cauſes of things? This it has always profeſſed, when we trace it to its cradle. It never entered into any man's thought, before the Philoſopher we have mentioned, to put the previous queſtion, whether things have a cauſe or not? Had it been thought poſſible that they might not, it may be preſumed, that, in the variety of abſurd and contradictory cauſes aſſigned, ſome one would have had recourſe to this hypotheſis.

They could conceive the world to ariſe from an egg, from a ſtruggle between love and ſtrife, between moiſture and drought, between heat and cold; but they never ſuppoſed that it had no cauſe. We know not any Atheiſtic ſect that ever had recourſe to this topic, though by it they might have evaded every argument that could be brought againſt them, and anſwered all objections to their ſyſtem.

But rather than adopt ſuch an abſurdity, they contrived ſome imaginary cauſe; ſuch as chance, a concourſe of atoms, or neceſſity, as the cauſe of the univerſe.

The accounts which Philoſophers have given of particular phæ-

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nomena, as well as of the univerſe in general, proceed upon the ſame principle. That every phænomenon muſt have a cauſe, was always taken for granted. *Nil turpius phyſico*, ſays CICERO, *quam fieri ſine cauſa quicquam dicere.* Though an Academic, he was dogmatical in this. And PLATO, the Father of the academy, was no leſs ſo. "Πάντι γὰρ ἀδύνατον χωρὶς αἰτίου γένεσιν σχεῖν. TIMÆUS." It is impoſſible that any thing ſhould have its origin without a cauſe.

I believe Mr HUME was the firſt who ever held the contrary. This, indeed, he avows, and aſſumes the honour of the diſcovery. "It is, ſays he, a maxim in philoſophy, that whatever begins to "exiſt, muſt have a cauſe of exiſtence. This is commonly taken "for granted in all reaſonings, without any proof given or de-"manded. It is ſuppoſed to be founded on intuition, and to be "one of thoſe maxims, which, though they may be denied with "the lips, it is impoſſible for men in their hearts really to doubt "of. But, if we examine this maxim by the idea of knowledge, "above explained, we ſhall diſcover in it no mark of ſuch intui-"tive certainty." The meaning of this ſeems to be, that it did not ſuit with his theory of intuitive certainty, and therefore he excludes it from that privilege.

The vulgar adhere to this maxim as firmly and univerſally as the Philoſophers. Their ſuperſtitions have the ſame origin as the ſyſtems of Philoſophers, to wit, a deſire to know the cauſes of things. *Felix qui potuit rerum cognoſcere cauſas*, is the univerſal ſenſe of men; but to ſay that any thing can happen without a cauſe, ſhocks the common ſenſe of a ſavage.

This univerſal belief of mankind is eaſily accounted for, if we allow that the neceſſity of a cauſe of every event is obvious to the rational powers of a man. But it is impoſſible to account for it otherwiſe. It cannot be aſcribed to education, to ſyſtems of philoſophy, or to prieſtcraft. One would think, that a Philoſopher who takes it to be a general deluſion or prejudice, would endeavour

to

to ſhow from what cauſes in human nature ſuch a general error may take its riſe. But I forget that Mr HUME might anſwer upon his own principles, that ſince things may happen without a cauſe, this error and deluſion of men may be univerſal without any cauſe.

A ſecond reaſon why I conceive this to be a firſt principle, is, That mankind not only aſſent to it in ſpeculation, but that the practice of life is grounded upon it in the moſt important matters, even in caſes where experience leaves us doubtful; and it is impoſſible to act with common prudence if we ſet it aſide.

In great families there are ſo many bad things done by a certain perſonage called *nobody*, that it is proverbial, that there is a nobody about every houſe who does a great deal of miſchief; and even where there is the exacteſt inſpection and government, many events will happen of which no other author can be found: So that, if we truſt merely to experience in this matter, nobody will be found to be a very active perſon, and to have no inconſiderable ſhare in the management of affairs. But whatever countenance this ſyſtem may have from experience, it is too ſhocking to common ſenſe to impoſe upon the moſt ignorant. A child knows, that when his top, or any of his play-things are taken away, it muſt be done by ſomebody. Perhaps it would not be difficult to perſuade him that it was done by ſome inviſible being, but that it ſhould be done by nobody he cannot believe.

Suppoſe a man's houſe to be broke open, his money and jewels taken away. Such things have happened times innumerable without any apparent cauſe; and were he only to reaſon from experience in ſuch a caſe, how muſt he behave? He muſt put in one ſcale the inſtances wherein a cauſe was found of ſuch an event, and in the other ſcale, the inſtances where no cauſe was found, and the preponderant ſcale muſt determine, whether it be moſt probable that there was a cauſe of this event, or that there was none.

CHAP. VI. Would any man of common underſtanding have recourſe to ſuch an expedient to direct his judgment?

Suppoſe a man to be found dead on the highway, his ſkull fractured, his body pierced with deadly wounds, his watch and money carried off. The coroners jury ſits upon the body, and the queſtion is put, what was the cauſe of this man's death, was it accident, or *felo de ſe*, or murder by perſons unknown? Let us ſuppoſe an adept in Mr HUME's philoſophy to make one of the jury, and that he inſiſts upon the previous queſtion, whether there was any cauſe of the event, and whether it happened without a cauſe?

Surely, upon Mr HUME's principles, a great deal might be ſaid upon this point; and, if the matter is to be determined by paſt experience, it is dubious on which ſide the weight of argument might ſtand. But we may venture to ſay, that, if Mr HUME had been of ſuch a jury, he would have laid aſide his philoſophical principles, and acted according to the dictates of common prudence.

Many paſſages might be produced, even in Mr HUME's philoſophical writings, in which he, unawares, betrays the ſame inward conviction of the neceſſity of cauſes, which is common to other men. I ſhall mention only one, in the Treatiſe of Human Nature, and in that part of it where he combats this very principle. "As "to thoſe impreſſions, ſays he, which ariſe from the ſenſes, their "ultimate cauſe is, in my opinion, perfectly inexplicable by hu-"man reaſon; and it will always be impoſſible to decide with "certainty, whether they ariſe immediately from the object, or are "produced by the creative power of the mind, or are derived from "the Author of our being."

Among theſe alternatives, he never thought of their not ariſing from any cauſe.

The arguments which Mr HUME offers to prove that this is not a ſelf-

ſelf-evident principle, are three. *Firſt*, That all certainty ariſes from a compariſon of ideas, and a diſcovery of their unalterable relations, none of which relations imply this propoſition, That whatever has a beginning muſt have a cauſe of exiſtence. This theory of certainty has been examined before.

The *ſecond* argument is, That whatever we can conceive is poſſible. This has likewiſe been examined.

The *third* argument is, That what we call a cauſe, is only ſomething antecedent to, and always conjoined with the effect. This is alſo one of Mr HUME's peculiar doctrines, which we may have occaſion to conſider afterwards. It is ſufficient here to obſerve, that we may learn from it that night is the cauſe of day, and day the cauſe of night: For no two things have more conſtantly followed each other ſince the beginning of the world.

The *laſt* metaphyſical principle I mention, which is oppoſed by the ſame author, is, That deſign, and intelligence in the cauſe, may be inferred, with certainty, from marks or ſigns of it in the effect.

Intelligence, deſign, and ſkill, are not objects of the external ſenſes, nor can we be conſcious of them in any perſon but ourſelves. Even in ourſelves, we cannot, with propriety, be ſaid to be conſcious of the natural or acquired talents we poſſeſs. We are conſcious only of the operations of mind in which they are exerted. Indeed, a man comes to know his own mental abilities, juſt as he knows another man's, by the effects they produce, when there is occaſion to put them to exerciſe.

A man's wiſdom is known to us only by the ſigns of it in his conduct; his eloquence by the ſigns of it in his ſpeech. In the ſame manner we judge of his virtue, of his fortitude, and of all his talents and virtues.

Yet

CHAP. VI. Yet it is to be obſerved, that we judge of mens talents with as little doubt or heſitation as we judge of the immediate objects of ſenſe.

One perſon, we are ſure, is a perfect idiot; another, who feigns idiocy to ſcreen himſelf from puniſhment, is found upon trial to have the underſtanding of a man, and to be accountable for his conduct. We perceive one man to be open, another cunning; one to be ignorant, another very knowing; one to be ſlow of underſtanding, another quick. Every man forms ſuch judgments of thoſe he converſes with; and the common affairs of life depend upon ſuch judgments. We can as little avoid them as we can avoid ſeeing what is before our eyes.

From this it appears, that it is no leſs a part of the human conſtitution, to judge of mens characters, and of their intellectual powers, from the ſigns of them in their actions and diſcourſe, than to judge of corporeal objects by our ſenſes: That ſuch judgments are common to the whole human race that are endowed with underſtanding; and that they are abſolutely neceſſary in the conduct of life.

Now, every judgment of this kind we form, is only a particular application of the general principle, that intelligence, wiſdom, and other mental qualities in the cauſe, may be inferred from their marks or ſigns in the effect.

The actions and diſcourſes of men are effects, of which the actors and ſpeakers are the cauſes. The effects are perceived by our ſenſes; but the cauſes are behind the ſcene. We only conclude their exiſtence and their degrees from our obſervation of the effects.

From wiſe conduct we infer wiſdom in the cauſe; from brave actions we infer courage; and ſo in other caſes.

This

This inference is made with perfect ſecurity by all men. We cannot avoid it; it is neceſſary in the ordinary conduct of life; it has therefore the ſtrongeſt marks of being a firſt principle.

Perhaps ſome may think that this principle may be learned either by reaſoning or by experience, and therefore that there is no ground to think it a firſt principle.

If it can be ſhewn to be got by reaſoning, by all, or the greater part of thoſe who are governed by it, I ſhall very readily acknowledge that it ought not to be eſteemed a firſt principle. But I apprehend the contrary appears from very convincing arguments.

Firſt, The principle is too univerſal to be the effect of reaſoning. It is common to Philoſophers and to the vulgar; to the learned and the moſt illiterate; to the civilized and to the ſavage: And of thoſe who are governed by it, not one in ten thouſand can give a reaſon for it.

Secondly, We find Philoſophers, ancient and modern, who can reaſon excellently in ſubjects that admit of reaſoning, when they have occaſion to defend this principle, not offering reaſons for it, or any *medium* of proof, but appealing to the common ſenſe of mankind; mentioning particular inſtances, to make the abſurdity of the contrary opinion more apparent, and ſometimes uſing the weapons of wit and ridicule, which are very proper weapons for refuting abſurdities, but altogether improper in points that are to be determined by reaſoning.

To confirm this obſervation, I ſhall quote two authors, an ancient and a modern, who have more expreſsly undertaken the defence of this principle than any others I remember to have met with, and whoſe good ſenſe and ability to reaſon, where reaſoning is proper, will not be doubted.

The

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The firſt is CICERO, whoſe words, *lib.* 1. *cap.* 13. *De divinatione*, may be thus tranſlated.

" Can any thing done by chance have all the marks of deſign? " Four dice may by chance turn up four aces; but do you think " that four hundred dice, thrown by chance, will turn up four " hundred aces? Colours thrown upon canvas without deſign " may have ſome ſimilitude to a human face; but do you think " they might make as beautiful a picture as that of the Coan Ve- " nus? A hog turning up the ground with his noſe may make " ſomething of the form of the letter A; but do you think that a " hog might deſcribe on the ground the Andromache of ENNIUS? " CARNEADES imagined, that in the ſtone quarries at Chios he " found, in a ſtone that was ſplit, a repreſentation of the head of " a little Pan, or ſylvan deity. I believe he might find a figure " not unlike; but ſurely not ſuch a one as you would ſay had " been formed by an excellent Sculptor like SCOPAS. For ſo, verily, " the caſe is, that chance never perfectly imitates deſign." Thus CICERO.

Now, in all this diſcourſe I ſee very good ſenſe, and what is apt to convince every unprejudiced mind; but I ſee not in the whole a ſingle ſtep of reaſoning. It is barely an appeal to every man's common ſenſe.

Let us next ſee how the ſame point is handled by the excellent Archbiſhop TILLOTSON, 1ſt Sermon, vol. 1.

" For I appeal to any man of reaſon, whether any thing can " be more unreaſonable, than obſtinately to impute an effect to " chance which carries in the face of it all the arguments and " characters of deſign? Was ever any conſiderable work, in which " there was required a great variety of parts, and an orderly and " regular adjuſtment of theſe parts, done by chance? Will chance " fit means to ends, and that in ten thouſand inſtances, and not " fail

" fail in any one? How often might a man, after he had jumbled CHAP. VI.
" a ſet of letters in a bag, fling them out upon the ground before
" they would fall into an exact poem, yea or ſo much as make a
" good diſcourſe in proſe? And may not a little book be as eaſily
" made as this great volume of the world? How long might a
" man ſprinkle colours upon canvas with a careleſs hand before
" they would make the exact picture of a man? And is a man
" eaſier made by chance than his picture? How long might twen-
" ty thouſand blind men, which ſhould be ſent out from the re-
" mote parts of England, wander up and down before they would
" all meet upon Saliſbury plains, and fall into rank and file in the
" exact order of an army? And yet this is much more eaſy to be
" imagined than how the innumerable blind parts of matter ſhould
" rendezvous themſelves into a world. A man that ſees Henry
" the Seventh's chapel at Weſtminſter might with as good reaſon
" maintain, (yea and much better, conſidering the vaſt difference
" between that little ſtructure and the huge fabric of the world),
" that it was never contrived or built by any man, but that the
" ſtones did by chance grow into thoſe curious figures into which
" we ſee them to have been cut and graven; and that upon a time,
" (as tales uſually begin), the materials of that building, the ſtone,
" mortar, timber, iron, lead, and glaſs, happily met together, and
" very fortunately ranged themſelves into that delicate order in
" which we ſee them now ſo cloſe compacted, that it muſt be a
" very great chance that parts them again. What would the world
" think of a man that ſhould advance ſuch an opinion as this, and
" write a book for it? If they would do him right, they ought to
" look upon him as mad. But yet he might maintain this opi-
" nion with a little more reaſon than any man can have to ſay
" that the world was made by chance, or that the firſt men grew
" out of the earth, as plants do now. For can any thing be more
" ridiculous and againſt all reaſon, than to aſcribe the production
" of men to the firſt fruitfulneſs of the earth, without ſo much as
" one inſtance or experiment in any age or hiſtory to countenance
" ſo monſtrous a ſuppoſition? The thing is at firſt ſight ſo groſs

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" and palpable, that no diſcourſe about it can make it more appa-
" rent. And yet theſe ſhameful beggars of principles, who give
" this precarious account of the original of things, aſſume to them-
" ſelves to be the men of reaſon, the great wits of the world, the
" only cautious and wary perſons, who hate to be impoſed upon,
" that muſt have convincing evidence for every thing, and can
" admit nothing without a clear demonſtration for it."

In this paſſage, the excellent author takes what I conceive to be the proper method of refuting an abſurdity, by expoſing it in different lights, in which every man of common underſtanding perceives it to be ridiculous. And although there is much good ſenſe, as well as wit, in the paſſage I have quoted, I cannot find one *medium* of proof in the whole.

I have met with one or two reſpectable authors who draw an argument from the doctrine of chances, to ſhew how improbable it is that a regular arrangement of parts ſhould be the effect of chance, or that it ſhould not be the effect of deſign.

I do not object to this reaſoning; but I would obſerve, that the doctrine of chances is a branch of mathematics little more than an hundred years old. But the concluſion drawn from it has been held by all men from the beginning of the world. It cannot, therefore, be thought that men have been led to this concluſion by that reaſoning. Indeed, it may be doubted whether the firſt principle upon which all the mathematical reaſoning about chances is grounded, is more ſelf-evident than this concluſion drawn from it, or whether it is not a particular inſtance of that general concluſion.

We are next to conſider whether we may not learn this truth from experience, That effects which have all the marks and tokens of deſign muſt proceed from a deſigning cauſe.

I;

I apprehend that we cannot learn this truth from experience, for two reaſons.

Firſt, Becauſe it is a neceſſary truth, not a contingent one. It agrees with the experience of mankind ſince the beginning of the world, that the area of a triangle is equal to half the rectangle under its baſe and perpendicular. It agrees no leſs with experience, that the ſun riſes in the eaſt and ſets in the weſt. So far as experience goes, theſe truths are upon an equal footing. But every man perceives this diſtinction between them, that the firſt is a neceſſary truth, and that it is impoſſible it ſhould not be true; but the laſt is not neceſſary, but contingent, depending upon the will of him who made the world. As we cannot learn from experience that twice three muſt neceſſarily make ſix, ſo neither can we learn from experience that certain effects muſt proceed from a deſigning and intelligent cauſe. Experience informs us only of what has been, but never of what muſt be.

Secondly, It may be obſerved, that experience can ſhow a connection between a ſign, and the thing ſignified by it, in thoſe caſes only, where both the ſign and thing ſignified are perceived, and have always been perceived in conjunction. But if there be any caſe where the ſign only is perceived, experience can never ſhew its connection with the thing ſignified. Thus, for example, thought is a ſign of a thinking principle or mind. But how do we know that thought cannot be without a mind. If any man ſhould ſay that he knows this by experience, he deceives himſelf. It is impoſſible he can have any experience of this; becauſe, though we have an immediate knowledge of the exiſtence of thought in ourſelves by conſciouſneſs, yet we have no immediate knowledge of a mind. The mind is not an immediate object either of ſenſe or of conſciouſneſs. We may therefore juſtly conclude, that the neceſſary connection between thought and a mind, or thinking being, is not learned from experience.

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The ſame reaſoning may be applied to the connection between a work excellently fitted for ſome purpoſe, and deſign in the author or cauſe of that work. One of theſe, to wit, the work, may be an immediate object of perception. But the deſign and purpoſe of the author cannot be an immediate object of perception; and therefore experience can never inform us of any connection between the one and the other, far leſs of a neceſſary connection.

Thus I think it appears, that the principle we have been conſidering, to wit, that from certain ſigns or indications in the effect, we may infer, that there muſt have been intelligence, wiſdom, or other intellectual or moral qualities in the cauſe, is a principle which we get, neither by reaſoning nor by experience; and therefore, if it be a true principle, it muſt be a firſt principle. There is in the human underſtanding a light, by which we ſee immediately the evidence of it, when there is occaſion to apply it.

Of how great importance this principle is in common life, we have already obſerved. And I need hardly mention its importance in natural theology.

The clear marks and ſignatures of wiſdom, power and goodneſs, in the conſtitution and government of the world, is, of all arguments that have been advanced for the being and providence of the Deity, that which in all ages has made the ſtrongeſt impreſſion upon candid and thinking minds; an argument, which has this peculiar advantage, that it gathers ſtrength as human knowledge advances, and is more convincing at preſent than it was ſome centuries ago.

King ALPHONSUS might ſay, that he could contrive a better planetary ſyſtem than that which Aſtronomers held in his day. That ſyſtem was not the work of God, but the fiction of men.

But ſince the true ſyſtem of the ſun, moon, and planets, has been

been diſcovered, no man, however atheiſtically diſpoſed, has pretended to ſhew how a better could be contrived.

When we attend to the marks of good contrivance which appear in the works of God, every diſcovery we make in the conſtitution of the material or intellectual ſyſtem becomes a hymn of praiſe to the great Creator and Governor of the world. And a man who is poſſeſſed of the genuine ſpirit of philoſophy will think it impiety to contaminate the Divine workmanſhip, by mixing it with thoſe fictions of human fancy, called theories and hypotheſes, which will always bear the ſignatures of human folly, no leſs than the other does of Divine wiſdom.

I know of no perſon who ever called in queſtion the principle now under our conſideration, when it is applied to the actions and diſcourſes of men: For this would be to deny that we have any means of diſcerning a wiſe man from an idiot, or a man that is illiterate in the higheſt degree from a man of knowledge and learning, which no man has the effrontery to deny.

But, in all ages, thoſe who have been unfriendly to the principles of religion, have made attempts to weaken the force of the argument for the exiſtence and perfections of the Deity, which is founded on this principle. That argument has got the name of the argument from final cauſes; and as the meaning of this name is well underſtood, we ſhall uſe it.

The argument from final cauſes, when reduced to a ſyllogiſm, has theſe two premiſes: *Firſt*, That deſign and intelligence in the cauſe, may, with certainty, be inferred from marks or ſigns of it in the effect. This is the principle we have been conſidering, and we may call it the *major* propoſition of the argument. The *ſecond*, which we call the *minor* propoſition, is, That there are in fact the cleareſt marks of deſign and wiſdom in the works of Nature; and the concluſion is, that the works of Nature are the effects.

CHAP. VI. fects of a wife and intelligent cauſe. One muſt either aſſent to the concluſion, or deny one or other of the premiſes.

Thoſe among the ancients who denied a God or a Providence, ſeem to me to have yielded the major propoſition, and to have denied the minor; conceiving that there are not in the conſtitution of things ſuch marks of wiſe contrivance as are ſufficient to put the concluſion beyond doubt. This, I think, we may learn, from the reaſoning of COTTA the Academic, in the third book of CICERO, of the Nature of the Gods.

The gradual advancement made in the knowledge of Nature hath put this opinion quite out of countenance.

When the ſtructure of the human body was much leſs known than it is now, the famous GALEN ſaw ſuch evident marks of wiſe contrivance in it, that though he had been educated an Epicurean, he renounced that ſyſtem, and wrote his book of the uſe of the parts of the human body, on purpoſe to convince others of what appeared ſo clear to himſelf, that it was impoſſible that ſuch admirable contrivance ſhould be the effect of chance.

Thoſe, therefore, of later times, who are diſſatisfied with this argument from final cauſes, have quitted the ſtrong hold of the ancient Atheiſts, which had become untenable, and have choſen rather to make a defence againſt the major propoſition.

DES CARTES ſeems to have led the way in this, though he was no Atheiſt. But, having invented ſome new arguments for the being of God, he was perhaps led to diſparage thoſe that had been uſed before, that he might bring more credit to his own. Or perhaps he was offended with the Peripatetics, becauſe they often mixed final cauſes with phyſical, in order to account for the phænomena of nature.

He

He maintained therefore that phyſical cauſes only ſhould be aſſigned for phænomena; that the Philoſopher has nothing to do with final cauſes; and that it is preſumption in us to pretend to determine for what end any work of nature is framed. Some of thoſe who were great admirers of DES CARTES, and followed him in many points, differed from him in this, particularly, Dr HENRY MORE and the pious Archbiſhop FENELON: But others, after the example of DES CARTES, have ſhewn a contempt of all reaſoning from final cauſes. Among theſe, I think, we may reckon MAUPERTUIS and BUFFON. But the moſt direct attack has been made upon this principle by Mr HUME, who puts an argument in the mouth of an Epicurean, on which he ſeems to lay great ſtreſs.

The argument is, That the univerſe is a ſingular effect, and therefore we can draw no concluſion from it, whether it may have been made by wiſdom or not.

If I underſtand the force of this argument, it amounts to this, That, if we had been accuſtomed to ſee worlds produced, ſome by wiſdom and others without it, and had obſerved, that ſuch a world as this which we inhabit was always the effect of wiſdom, we might then, from paſt experience, conclude, that this world was made by wiſdom; but having no ſuch experience, we have no means of forming any concluſion about it.

That this is the ſtrength of the argument, appears, becauſe if the marks of wiſdom ſeen in one world be no evidence of wiſdom, the like marks ſeen in ten thouſand will give as little evidence, unleſs, in time paſt, we perceived wiſdom itſelf conjoined with the tokens of it; and, from their perceived conjunction in time paſt, conclude, that although, in the preſent world, we ſee only one of the two, the other muſt accompany it.

Whence it appears, that this reaſoning of Mr HUME is built on the ſuppoſition, that our inferring deſign from the ſtrongeſt marks of

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of it, is entirely owing to our paſt experience of having always found theſe two things conjoined. But I hope I have made it evident that this is not the caſe. And indeed it is evident, that, according to this reaſoning, we can have no evidence of mind or deſign in any of our fellow-men.

How do I know that any man of my acquaintance has underſtanding? I never ſaw his underſtanding. I ſee only certain effects, which my judgment leads me to conclude to be marks and tokens of it.

But, ſays the ſceptical Philoſopher, you can conclude nothing from theſe tokens, unleſs paſt experience has informed you that ſuch tokens are always joined with underſtanding. Alas! Sir, it is impoſſible I can ever have this experience. The underſtanding of another man is no immediate object of ſight, or of any other faculty which God hath given me; and unleſs I can conclude its exiſtence from tokens that are viſible, I have no evidence that there is underſtanding in any man.

It ſeems then, that the man who maintains, that there is no force in the argument from final cauſes, muſt, if he will be conſiſtent, ſee no evidence of the exiſtence of any intelligent being but himſelf.

CHAP. VII.

Opinions ancient and modern about firſt Principles.

I KNOW no writer who has treated expreſsly of firſt principles before ARISTOTLE; but it is probable, that, in the ancient Pythagorean ſchool, from which both PLATO and ARISTOTLE borrowed much, this ſubject had not been left untouched.

Before

Before the time of ARISTOTLE, conſiderable progreſs had been made in the mathematical ſciences, particularly in geometry.

The diſcovery of the forty-ſeventh propoſition of the firſt book of EUCLID, and of the five regular ſolids, is, by antiquity, aſcribed to PYTHAGORAS himſelf; and it is impoſſible he could have made thoſe diſcoveries without knowing many other propoſitions in mathematics. ARISTOTLE mentions the incommenſurability of the diagonal of a ſquare to its ſide, and gives a hint of the manner in which it was demonſtrated. We find likewiſe ſome of the axioms of geometry mentioned by ARISTOTLE as axioms, and as indemonſtrable principles of mathematical reaſoning.

It is probable, therefore, that, before the time of ARISTOTLE, there were elementary Treatiſes of geometry, which are now loſt; and that in them the axioms were diſtinguiſhed from the propoſitions which require proof.

To ſuppoſe, that ſo perfect a ſyſtem as that of EUCLID's Elements was produced by one man, without any preceding model or materials, would be to ſuppoſe EUCLID more than a man. We aſcribe to him as much as the weakneſs of human underſtanding will permit, if we ſuppoſe that the inventions in geometry, which had been made in a tract of preceding ages, were by him not only carried much farther, but digeſted into ſo admirable a ſyſtem, that his work obſcured all that went before it, and made them be forgot and loſt.

Perhaps, in like manner, the writings of ARISTOTLE with regard to firſt principles, and with regard to many other abſtract ſubjects, may have occaſioned the loſs of what had been written upon thoſe ſubjects by more ancient Philoſophers.

Whatever may be in this, in his ſecond book upon demonſtration he has treated very fully of firſt principles; and though he

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has not attempted any enumeration of them, he ſhows very clearly, that all demonſtration muſt be built upon truths which are evident of themſelves, but cannot be demonſtrated. His whole doctrine of ſyllogiſms is grounded upon a few axioms, from which he endeavours to demonſtrate the rules of ſyllogiſm in a mathematical way; and in his topics he points out many of the firſt principles of probable reaſoning.

As long as the philoſophy of ARISTOTLE prevailed, it was held as a fixed point, that all proof muſt be drawn from principles already known and granted.

We muſt obſerve, however, that, in that philoſophy, many things were aſſumed as firſt principles, which have no juſt claim to that character; ſuch as, that the earth is at reſt; that Nature abhors a vacuum; that there is no change in the heavens above the ſphere of the moon; that the heavenly bodies move in circles, that being the moſt perfect figure; that bodies do not gravitate in their proper place; and many others.

The Peripatetic philoſophy, therefore, inſtead of being deficient in firſt principles, was redundant; inſtead of rejecting thoſe that are truly ſuch, it adopted, as firſt principles, many vulgar prejudices and raſh judgments: And this ſeems in general to have been the ſpirit of ancient philoſophy.

It is true, there were among the ancients ſceptical Philoſophers who profeſſed to have no principles, and held it to be the greateſt virtue in a Philoſopher to with-hold aſſent, and keep his judgment in a perfect equilibrium between contradictory opinions. But though this ſect was defended by ſome perſons of great erudition and acuteneſs, it died of itſelf, and the dogmatic philoſophy of ARISTOTLE obtained a complete triumph over it.

What Mr HUME ſays of thoſe who are ſceptical with regard to moral

moral diſtinctions, ſeems to have had its accompliſhment in the ancient ſect of Sceptics. " The only way, ſays he, of converting " antagoniſts of this kind, is to leave them to themſelves; for " finding that nobody keeps up the controverſy with them, it is " probable they will at laſt of themſelves, from mere wearineſs, " come over to the ſide of common ſenſe and reaſon." CHAP. VII.

Setting aſide this ſmall ſect of the Sceptics, which was extinct many ages before the authority of ARISTOTLE declined, I know of no oppoſition made to firſt principles among the ancients. The diſpoſition was, as has been obſerved, not to oppoſe, but to multiply them beyond meaſure.

Men have always been prone, when they leave one extreme to run into the oppoſite; and this ſpirit in the ancient philoſophy to multiply firſt principles beyond reaſon, was a ſtrong preſage, that, when the authority of the Peripatetic ſyſtem was at an end, the next reigning ſyſtem would diminiſh their number beyond reaſon.

This accordingly happened in that great revolution of the philoſophical republic brought about by DES CARTES. That truly great reformer in philoſophy, cautious to avoid the ſnare in which ARISTOTLE was taken, of admitting things as firſt principles too raſhly, reſolved to doubt of every thing, and to with-hold his aſſent, until it was forced by the cleareſt evidence.

Thus DES CARTES brought himſelf into that very ſtate of ſuſpenſe, which the ancient Sceptics recommended as the higheſt perfection of a wiſe man, and the only road to tranquillity of mind. But he did not remain long in this ſtate; his doubt did not ariſe from deſpair of finding the truth, but from caution, that he might not be impoſed upon, and embrace a cloud inſtead of a goddeſs.

His very doubting convinced him of his own exiſtence; for

CHAP. VII. that which does not exiſt, can neither doubt, nor believe, nor reaſon.

Thus he emerged from univerſal ſcepticiſm by this ſhort enthymeme, *cogito ergo ſum.*

This enthymeme conſiſts of an antecedent propoſition, *I think*, and a concluſion drawn from it, *therefore I exiſt.*

If it ſhould be aſked, how DES CARTES came to be certain of the antecedent prepoſition, it is evident, that for this he truſted to the teſtimony of conſciouſneſs. He was conſcious that he thought, and needed no other argument.

So that the firſt principle which he adopts in this famous enthymeme is this, That thoſe doubts, and thoughts, and reaſonings, of which he was conſcious, did certainly exiſt, and that his conſciouſneſs put their exiſtence beyond all doubt.

It might have been objected to this firſt principle of DES CARTES, how do you know that your conſciouſneſs cannot deceive you? You have ſuppoſed, that all you ſee, and hear, and handle, may be an illuſion. Why therefore ſhould the power of conſciouſneſs have this prerogative, to be believed implicitly, when all our other powers are ſuppoſed fallacious?

To this objection, I know no other anſwer that can be made, but that we find it impoſſible to doubt of things of which we are conſcious. The conſtitution of our nature forces this belief upon us irreſiſtibly.

This is true, and is ſufficient to juſtify DES CARTES, in aſſuming, as a firſt principle, the exiſtence of thought, of which he was conſcious.

He ought, however, to have gone farther in this track, and to have

have conſidered whether there may not be other firſt principles which ought to be adopted for the ſame reaſon. But he did not ſee this to be neceſſary, conceiving that, upon this one firſt principle, he could ſupport the whole fabric of human knowledge.

To proceed to the concluſion of DES CARTES's enthymeme. From the exiſtence of his thought he infers his own exiſtence. Here he aſſumes another firſt principle, not a contingent, but a neceſſary one; to wit, that where there is thought, there muſt be a thinking being or mind.

Having thus eſtabliſhed his own exiſtence, he proceeds to prove the exiſtence of a ſupreme and infinitely perfect Being; and, from the perfection of the Deity, he infers that his ſenſes, his memory, and the other faculties which God had given him, are not fallacious.

Whereas other men, from the beginning of the world, had taken for granted, as a firſt principle, the truth and reality of what they perceive by their ſenſes, and from thence inferred the exiſtence of a Supreme Author and Maker of the world, DES CARTES took a contrary courſe, conceiving that the teſtimony of our ſenſes, and of all our faculties, excepting that of conſciouſneſs, ought not to be taken for granted, but to be proved by argument.

Perhaps ſome may think that DES CARTES meant only to admit no other firſt principle of contingent truths beſides that of conſciouſneſs; but that he allowed the axioms of mathematics, and of other neceſſary truths, to be received without proof.

But I apprehend this was not his intention: For the truth of mathematical axioms muſt depend upon the truth of the faculty by which we judge of them. If the faculty be fallacious, we may be deceived by truſting to it. Therefore, as he ſuppoſes that all our faculties, excepting conſciouſneſs, may be fallacious, and attempts

CHAP. VII. tempts to prove by argument that they are not, it follows, that, according to his principles, even mathematical axioms require proof. Neither did he allow that there are any neceſſary truths, but maintained, that the truths which are commonly ſo called, depend upon the will of God. And we find his followers, who may be ſuppoſed to underſtand his principles, agree in maintaining, that the knowledge of our own exiſtence is the firſt and fundamental principle from which all knowledge muſt be deduced by one who proceeds regularly in philoſophy.

There is, no doubt, a beauty in raiſing a large fabric of knowledge upon a few firſt principles. The ſtately fabric of mathematical knowledge, raiſed upon the foundation of a few axioms and definitions, charms every beholder. DES CARTES, who was well acquainted with this beauty in the mathematical ſciences, ſeems to have been ambitious to give the ſame beautiful ſimplicity to his ſyſtem of philoſophy; and therefore ſought only one firſt principle as the foundation of all our knowledge, at leaſt of contingent truths.

And ſo far has his authority prevailed, that thoſe who came after him have almoſt univerſally followed him in this track. This, therefore, may be conſidered as the ſpirit of modern philoſophy, to allow of no firſt principles of contingent truths but this one, that the thoughts and operations of our own minds, of which we are conſcious, are ſelf-evidently real and true; but that every thing elſe that is contingent is to be proved by argument.

The exiſtence of a material world, and of what we perceive by our ſenſes, is not ſelf-evident, according to this philoſophy. DES CARTES founded it upon this argument, That God, who hath given us our ſenſes, and all our faculties, is no deceiver, and therefore they are not fallacious.

I endeavoured to ſhow, that if it be not admitted as a firſt principle,

ciple, that our faculties are not fallacious, nothing elſe can be admitted; and that it is impoſſible to prove this by argument, unleſs God ſhould give us new faculties to ſit in judgment upon the old.

Father MALEBRANCHE agreed with DES CARTES, that the exiſtence of a material world requires proof; but being diſſatisfied with DES CARTES's argument from the perfection of the Deity, thought that the only ſolid proof is from divine revelation.

ARNAULD, who was engaged in controverſy with MALEBRANCHE, approves of his antagoniſt in offering an argument to prove the exiſtence of the material world, but objects to the ſolidity of his argument, and offers other arguments of his own.

Mr NORRIS, a great admirer of DES CARTES and of MALEBRANCHE, ſeems to have thought all the arguments offered by them and by ARNAULD to be weak, and confeſſes that we have at beſt only probable evidence of the exiſtence of the material world.

Mr LOCKE acknowledges that the evidence we have of this point is neither intuitive nor demonſtrative; yet he thinks it may be called knowledge, and diſtinguiſhes it by the name of ſenſitive knowledge; and, as the ground of this ſenſitive knowledge, he offers ſome weak arguments, which would rather tempt one to doubt than to believe.

At laſt Biſhop BERKELEY and ARTHUR COLLIER, without any knowledge of each other, as far as appears by their writings, undertook to prove that there neither is nor can be a material world. The excellent ſtyle and elegant compoſition of the former have made his writings to be known and read, and this ſyſtem to be attributed to him only, as if COLLIER had never exiſted.

Both, indeed, owe ſo much to MALEBRANCHE, that if we take out

CHAP. VII.

out of his ſyſtem the peculiarities of our ſeeing all things in God, and our learning the exiſtence of an external world from divine revelation, what remains is juſt the ſyſtem of Biſhop BERKELEY. I make this obſervation by the way, in juſtice to a foreign author, to whom Britiſh authors ſeem not to have allowed all that is due.

Mr HUME hath adopted Biſhop BERKELEY's arguments againſt the exiſtence of matter, and thinks them unanſwerable.

We may obſerve, that this great Metaphyſician, though in general he declares in favour of univerſal ſcepticiſm, and therefore may ſeem to have no firſt principles at all, yet, with DES CARTES, he always acknowledges the reality of thoſe thoughts and operations of mind of which we are conſcious. So that he yields the antecedent of DES CARTES's enthymeme *cogito*, but denies the concluſion *ergo ſum*, the mind being, according to him, nothing but that train of impreſſions and ideas of which we are conſcious.

Thus we ſee, that the modern philoſophy, of which DES CARTES may juſtly be accounted the founder, being built upon the ruins of the Peripatetic, has a ſpirit quite oppoſite, and runs into a contrary extreme. The Peripatetic not only adopted as firſt principles thoſe which mankind have always reſted upon in their moſt important tranſactions, but, along with them, many vulgar prejudices; ſo that this ſyſtem was founded upon a wide bottom, but in many parts unſound. The modern ſyſtem has narrowed the foundation ſo much, that every ſuperſtructure raiſed upon it appears top-heavy.

From the ſingle principle of the exiſtence of our own thoughts, very little, if any thing, can be deduced by juſt reaſoning, eſpecially if we ſuppoſe that all our other faculties may be fallacious.

Accordingly we find that Mr HUME was not the firſt that was led into ſcepticiſm by the want of firſt principles. For ſoon after DES CARTES there aroſe a ſect in France called *Egoiſts*, who maintained

tained that we have no evidence of the exiſtence of any thing but ourſelves. CHAP. VII.

Whether theſe Egoiſts, like Mr HUME, believed themſelves to be nothing but a train of ideas and impreſſions, or to have a more permanent exiſtence, I have not learned, having never ſeen any of their writings; nor do I know whether any of this ſect did write in ſupport of their principles. One would think, they who did not believe that there was any perſon to read, could have little inducement to write, unleſs they were prompted by that inward monitor, which PERSIUS makes to be the ſource of genius and the teacher of arts. There can be no doubt, however, of the exiſtence of ſuch a ſect, as they are mentioned by many authors, and refuted by ſome, particularly by BUFFIER, in his Treatiſe of firſt principles.

Thoſe Egoiſts and Mr HUME ſeem to me to have reaſoned more conſequentially from DES CARTES principle than he did himſelf; and indeed I cannot help thinking, that all who have followed DES CARTES method, of requiring proof by argument of every thing except the exiſtence of their own thoughts, have eſcaped the abyſs of ſcepticiſm by the help of weak reaſoning and ſtrong faith more than by any other means. And they ſeem to me to act more conſiſtently, who having rejected the firſt principles on which belief muſt be grounded, have no belief, than they, who, like the others, rejecting firſt principles, muſt yet have a ſyſtem of belief, without any ſolid foundation on which it may ſtand.

The Philoſophers I have hitherto mentioned, after the time of DES CARTES, have all followed his method, in reſting upon the truth of their own thoughts as a firſt principle, but requiring arguments for the proof of every other truth of a contingent nature; but none of them, excepting Mr LOCKE, has expreſsly treated of firſt principles, or given any opinion of their utility or inutility. We only collect their opinion from their following DES CARTES

CHAP. VII. in requiring proof, or pretending to offer proof of the exiſtence of a material world, which ſurely ought to be received as a firſt principle, if any thing be, beyond what we are conſcious of.

I proceed, therefore, to conſider what Mr LOCKE has ſaid on the ſubject of firſt principles or maxims.

I have not the leaſt doubt of this author's candour in what he ſomewhere ſays, that his eſſay was moſtly ſpun out of his own thoughts. Yet it is certain, that, in many of the notions which we are wont to aſcribe to him, others were before him, particularly, DES CARTES, GASSENDI, and HOBBES. Nor is it at all to be thought ſtrange, that ingenious men, when they are got into the ſame track, ſhould hit upon the ſame things.

But, in the definition which he gives of knowledge in general, and in his notions concerning axioms or firſt principles, I know none that went before him, though he has been very generally followed in both.

His definition of knowledge, that it conſiſts ſolely in the perception of the agreement or diſagreement of our ideas, has been already conſidered. But ſuppoſing it to be juſt, ſtill it would be true, that ſome agreements and diſagreements of ideas muſt be immediately perceived; and ſuch agreements or diſagreements, when they are expreſſed by affirmative or negative propoſitions, are firſt principles, becauſe their truth is immediately diſcerned as ſoon as they are underſtood.

This I think is granted by Mr LOCKE, book 4. chap. 2. "There "is a part of our knowledge, ſays he, which we may call intuitive. "In this the mind is at no pains of proving or examining, but "perceives the truth as the eye does light, only by being directed "toward it. And this kind of knowledge is the cleareſt and moſt "certain that human frailty is capable of. This part of know-

"ledge

" ledge is irreſiſtible, and, like bright ſunſhine, forces itſelf im-
" mediately to be perceived, as ſoon as ever the mind turns its
" view that way."

He farther obſerves, " That this intuitive knowledge is neceſſary
" to connect all the ſteps of a demonſtration."

From this, I think, it neceſſarily follows, that, in every branch of knowledge, we muſt make uſe of truths that are intuitively known, in order to deduce from them ſuch as require proof.

But I cannot reconcile this with what he ſays, ſect. 8. of the ſame chapter. " The neceſſity of this intuitive knowledge in eve-
" ry ſtep of ſcientifical or demonſtrative reaſoning gave occaſion,
" I imagine, to that miſtaken axiom, that all reaſoning was *ex præ-*
" *cognitis et præconceſſis*, which, how far it is miſtaken, I ſhall have
" occaſion to ſhew more at large, when I come to conſider propo-
" ſitions, and particularly thoſe propoſitions which are called ma-
" xims, and to ſhew, that it is by a miſtake that they are ſuppo-
" ſed to be the foundation of all our knowledge and reaſonings."

I have carefully conſidered the chapter on maxims, which Mr LOCKE here refers to; and though one would expect, from the quotation laſt made, that it ſhould run contrary to what I have before delivered concerning firſt principles, I find only two or three ſentences in it, and thoſe chiefly incidental, to which I do not aſſent; and I am always happy in agreeing with a Philoſopher whom I ſo highly reſpect.

He endeavours to ſhow, that axioms or intuitive truths are not innate.

To this I agree. I maintain only, that when the underſtanding is ripe, and when we diſtinctly apprehend ſuch truths, we immediately aſſent to them.

CHAP. VII. He obſerves, that ſelf-evidence is not peculiar to thoſe propoſitions which paſs under the name of axioms, and have the dignity of axioms aſcribed to them.

I grant that there are innumerable ſelf-evident propoſitions, which have neither dignity nor utility, and therefore deſerve not the name of axioms, as that name is commonly underſtood to imply not only ſelf-evidence, but ſome degree of dignity or utility. That a man is a man, and that a man is not a horſe, are ſelf-evident propoſitions; but they are, as Mr LOCKE very juſtly calls them, trifling propoſitions. TILLOTSON very wittily ſays of ſuch propoſitions, that they are ſo ſurfeited with truth, that they are good for nothing; and as they deſerve not the name of axioms, ſo neither do they deſerve the name of knowledge.

He obſerves, that ſuch trifling ſelf-evident propoſitions as we have named are not derived from axioms, and therefore that all our knowledge is not derived from axioms.

I grant that they are not derived from axioms, becauſe they are themſelves ſelf-evident. But it is an abuſe of words to call them knowledge, as it is, to call them axioms; for no man can be ſaid to be the wiſer or more knowing for having millions of them in ſtore.

He obſerves, that the particular propoſitions contained under a general axiom are no leſs ſelf-evident than the general axiom, and that they are ſooner known and underſtood. Thus it is as evident, that my hand is leſs than my body, as that a part is leſs than the whole; and I know the truth of the particular propoſition, ſooner than that of the general.

This is true. A man cannot perceive the truth of a general axiom, ſuch as, that a part is leſs than the whole, until he has the general notions of a part and a whole formed in his mind; and, before

before he has theſe general notions, he may perceive that his hand is leſs than his body. CHAP. VII.

A great part of this chapter on maxims is levelled againſt a notion, which, it ſeems, ſome have entertained, that all our knowledge is derived from theſe two maxims, to wit, whatever is, is; and it is impoſſible for the ſame thing to be, and not to be.

This I take to be a ridiculous notion, juſtly deſerving the treatment which Mr LOCKE has given it, if it at all merited his notice. Theſe are identical propoſitions; they are trifling, and ſurfeited with truth: No knowledge can be derived from them.

Having mentioned how far I agree with Mr LOCKE concerning maxims or firſt principles, I ſhall next take notice of two or three things, wherein I cannot agree with him.

In the ſeventh ſection of this chapter, he ſays, That concerning the real exiſtence of all other beings, beſides ourſelves, and a firſt cauſe, there are no maxims.

I have endeavoured to ſhow that there are maxims or firſt principles with regard to other exiſtences. Mr LOCKE acknowledges that we have a knowledge of ſuch exiſtences, which, he ſays, is neither intuitive nor demonſtrative, and which therefore he calls ſenſitive knowledge. It is demonſtrable, and was long ago demonſtrated by ARISTOTLE, that every propoſition to which we give a rational aſſent, muſt either have its evidence in itſelf, or derive it from ſome antecedent propoſition. And the ſame thing may be ſaid of the antecedent propoſition. As therefore we cannot go back to antecedent propoſitions without end, the evidence muſt at laſt reſt upon propoſitions, one or more, which have their evidence in themſelves, that is, upon firſt principles.

As to the evidence of our own exiſtence, and of the exiſtence of

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CHAP. VII.

a firſt cauſe, Mr LOCKE does not ſay whether it reſts upon firſt principles or not. But it is manifeſt, from what he has ſaid upon both, that it does.

With regard to our own exiſtence, ſays he, we perceive it ſo plainly, and ſo certainly, that it neither needs nor is capable of any proof. This is as much as to ſay, that our own exiſtence is a firſt principle; for it is applying to this truth the very definition of a firſt principle.

He adds, that if I doubt, that very doubt makes me perceive my own exiſtence, and will nor ſuffer me to doubt of that. If I feel pain, I have as certain perception of my exiſtence as of the pain I feel.

Here we have two firſt principles plainly implied: *Firſt*, That my feeling pain, or being conſcious of pain, is a certain evidence of the real exiſtence of that pain. And, *ſecondly*, That pain cannot exiſt without a mind, or being that is pained. That theſe are firſt principles, and incapable of proof, Mr LOCKE acknowledges. And it is certain, that if they are not true, we can have no evidence of our own exiſtence. For if we may feel pain when no pain really exiſts, or if pain may exiſt without any being that is pained, then it is certain that our feeling pain can give us no evidence of our exiſtence.

Thus it appears, that the evidence of our own exiſtence, according to the view that Mr LOCKE gives of it, is grounded upon two of thoſe firſt principles which we had occaſion to mention.

If we conſider the argument he has given for the exiſtence of a firſt intelligent cauſe, it is no leſs evident that it is grounded upon other two of them. The firſt, That what begins to exiſt muſt have a cauſe of its exiſtence; and the ſecond, That an unintelligent and unthinking being, cannot be the cauſe of beings that are thinking and

and intelligent. Upon theſe two principles, he argues very convincingly for the exiſtence of a firſt intelligent cauſe of things. And, if theſe principles are not true, we can have no proof of the exiſtence of a firſt cauſe, either from our own exiſtence, or from the exiſtence of other things that fall within our view.

Another thing advanced by Mr LOCKE upon this ſubject, is, that no ſcience is, or hath been built upon maxims.

Surely Mr LOCKE was not ignorant of geometry, which hath been built upon maxims prefixed to the elements, as far back as we are able to trace it. But though they had not been prefixed, which was a matter of utility rather than neceſſity, yet it muſt be granted, that every demonſtration in geometry is grounded, either upon propoſitions formerly demonſtrated, or upon ſelf-evident principles.

Mr LOCKE farther ſays, that maxims are not of uſe to help men forward in the advancement of the ſciences, or new diſcoveries of yet unknown truths: That NEWTON, in the diſcoveries he has made in his never enough to be admired book, has not been aſſiſted by the general maxims, whatever is, is; or the whole is greater than a part, or the like.

I anſwer, the firſt of theſe is, as was before obſerved, an identical trifling propoſition, of no uſe in mathematics, or in any other ſcience. The ſecond is often uſed by NEWTON, and by all Mathematicians, and many demonſtrations reſt upon it. In general, NEWTON, as well as all other Mathematicians, grounds his demonſtrations of mathematical propoſitions upon the axioms laid down by EUCLID, or upon propoſitions which have been before demonſtrated by help of thoſe axioms.

But it deſerves to be particularly obſerved, that NEWTON, intending in the third book of his *Principia*, to give a more ſcientific

CHAP. VII. tific form to the phyſical part of aſtronomy, which he had at firſt compoſed in a popular form, thought proper to follow the example of EUCLID, and to lay down firſt, in what he calls, *Regulæ Philoſophandi*, and in his *Phænomena*, the firſt principles which he aſſumes in his reaſoning.

Nothing, therefore, could have been more unluckily adduced by Mr LOCKE to ſupport his averſion to firſt principles, than the example of Sir ISAAC NEWTON, who, by laying down the firſt principles upon which he reaſons in thoſe parts of natural philoſophy which he cultivated, has given a ſtability to that ſcience which it never had before, and which it will retain to the end of the world.

I am now to give ſome account of a Philoſopher, who wrote expreſsly on the ſubject of firſt principles, after Mr LOCKE.

PERE BUFFIER, a French Jeſuit, firſt publiſhed his *Traité des premiers Veritez, et de la ſource de nos jugements*, in 8vo, if I miſtake not, in the year 1724. It was afterwards publiſhed in folio, as a part of his *Cours des ſciences*. *Paris*, 1732.

He defines firſt principles to be propoſitions ſo clear, that they can neither be proved, nor combated by thoſe that are more clear.

The firſt ſource of firſt principles he mentions, is, that intimate conviction which every man has of his own exiſtence, and of what paſſes in his own mind. Some Philoſophers, he obſerves, admitted theſe as firſt principles, who were unwilling to admit any others; and he ſhows the ſtrange conſequences that follow from this ſyſtem.

A ſecond ſource of firſt principles he makes to be common ſenſe; which, he obſerves, Philoſophers have not been wont to conſider. He defines it to be, the diſpoſition which Nature has planted in all men, or the far greater part, which leads them, when they come to the uſe of reaſon, to form a common and uniform judgment upon objects

objects which are not objects of conſciouſneſs, nor are founded on any antecedent judgment. CHAP. VII.

He mentions, not as a full enumeration, but as a ſpecimen, the following principles of common ſenſe.

1. That there are other beings, and other men in the univerſe, beſides myſelf.

2. That there is in them ſomething that is called truth, wiſdom, prudence, and that theſe things are not purely arbitrary.

3. That there is ſomething in me which I call intelligence, and ſomething which is not that intelligence, which I call my body, and that theſe things have different properties.

4. That all men are not in a conſpiracy to deceive me and impoſe upon my credulity.

5. That what has not intelligence cannot produce the effects of intelligence, nor can pieces of matter thrown together by chance form any regular work, ſuch as a clock or watch.

He explains very particularly the ſeveral parts of his definition of common ſenſe, and ſhews how the dictates of common ſenſe may be diſtinguiſhed from common prejudices; and then enters into a particular conſideration of the primary truths that concern being in general; the truths that concern thinking beings; thoſe that concern body; and thoſe on which the various branches of human knowledge are grounded.

I ſhall not enter into a detail of his ſentiments on theſe ſubjects. I think there is more which I take to be original in this treatiſe, than in moſt books of the metaphyſical kind I have met with; that many of his notions are ſolid; and that others, which I cannot altogether approve, are ingenious.

CHAP. VII. The other writers I have mentioned, after DES CARTES, may, I think, without impropriety, be called Carteſians: For though they differ from DES CARTES in ſome things, and contradict him in others, yet they ſet out from the ſame principles, and follow the ſame method, admitting no other firſt principle with regard to the exiſtence of things but their own exiſtence, and the exiſtence of thoſe operations of mind of which they are conſcious, and requiring that the exiſtence of a material world, and the exiſtence of other men and things, ſhould be proved by argument.

This method of philoſophiſing is common to DES CARTES, MALEBRANCHE, ARNAULD, LOCKE, NORRIS, COLLIER, BERKELEY, and HUME; and, as it was introduced by DES CARTES, I call it the Carteſian ſyſtem, and thoſe who follow it Carteſians, not intending any diſreſpect by this term, but to ſignify a particular method of philoſophiſing common to them all, and begun by DES CARTES.

Some of theſe have gone the utmoſt length in ſcepticiſm, leaving no exiſtence in Nature but that of ideas and impreſſions. Some have endeavoured to throw off the belief of a material world only, and to leave us ideas and ſpirits. All of them have fallen into very groſs paradoxes, which can never ſit eaſy upon the human underſtanding, and which, though adopted in the cloſet, men find themſelves under a neceſſity of throwing off and diſclaiming when they enter into ſociety.

Indeed, in my judgment, thoſe who have reaſoned moſt acutely and conſequentially upon this ſyſtem, are they that have gone deepeſt into ſcepticiſm.

Father BUFFIER, however, is no Carteſian in this ſenſe. He ſeems to have perceived the defects of the Carteſian ſyſtem while it was in the meridian of its glory, and to have been aware that a ridiculous ſcepticiſm is the natural iſſue of it, and therefore nobly

nobly attempted to lay a broader foundation for human knowledge, and has the honour of being the firſt, as far as I know, after ARISTOTLE, who has given the world a juſt treatiſe upon firſt principles.

Some late writers, particularly Dr OSWALD, Dr BEATTIE, and Dr CAMPBELL, have been led into a way of thinking ſomewhat ſimilar to that of BUFFIER; the two former, as I have reaſon to believe, without any intercourſe with one another, or any knowledge of what BUFFIER had wrote on the ſubject. Indeed, a man who thinks, and who is acquainted with the philoſophy of Mr HUME, will very naturally be led to apprehend, that, to ſupport the fabric of human knowledge, ſome other principles are neceſſary than thoſe of DES CARTES and Mr LOCKE. BUFFIER muſt be acknowledged to have the merit of having diſcovered this, before the conſequences of the Carteſian ſyſtem were ſo fully diſplayed as they have been by Mr HUME. But I am apt to think, that the man who does not ſee this now, muſt have but a ſuperficial knowledge of theſe ſubjects.

The three writers above mentioned have my high eſteem and affection as men; but I intend to ſay nothing of them as writers upon this ſubject, that I may not incur the cenſure of partiality. Two of them have been joined ſo cloſely with me in the animadverſions of a celebrated writer, that we may be thought too near of kin to give our teſtimony of one another.

CHAP. VIII.

Of Prejudices, the Cauſes of Error.

OUR intellectual powers are wiſely fitted by the Author of our nature for the diſcovery of truth, as far as ſuits our preſent ſtate. Error is not their natural iſſue, any more than diſ-

CHAP. VIII. eaſe is of the natural ſtructure of the body. Yet, as we are liable to various diſeaſes of body from accidental cauſes, external and internal; ſo we are, from like cauſes, liable to wrong judgments.

Medical writers have endeavoured to enumerate the diſeaſes of the body, and to reduce them to a ſyſtem, under the name of noſology; and it were to be wiſhed that we had alſo a noſology of the human underſtanding.

When we know a diſorder of the body, we are often at a loſs to find the proper remedy; but in moſt caſes the diſorders of the underſtanding point out their remedies ſo plainly, that he who knows the one muſt know the other.

Many authors have furniſhed uſeful materials for this purpoſe, and ſome have endeavoured to reduce them to a ſyſtem. I like beſt the general diviſion given of them by Lord BACON in his fifth book *De augmentis ſcientiarum*, and more fully treated in his *Novum Organum*. He divides them into four claſſes, *idola tribus*, *idola ſpecus*, *idola fori*, and *idola theatri*. The names are perhaps fanciful; but I think the diviſion judicious, like moſt of the productions of that wonderful genius. And as this diviſion was firſt made by him, he may be indulged the privilege of giving names to its ſeveral members.

I propoſe in this chapter to explain the ſeveral members of this diviſion, according to the meaning of the author, and to give inſtances of each, without confining myſelf to thoſe which Lord BACON has given, and without pretending to a complete enumeration.

To every bias of the underſtanding, by which a man may be miſled in judging, or drawn into error, Lord BACON gives the name of an idol. The underſtanding, in its natural and beſt ſtate, pays its homage to truth only. The cauſes of error are conſidered by

by him as ſo many falſe deities, who receive the homage which is due only to truth. CHAP. VIII.

The firſt claſs are the *idola tribus*. Theſe are ſuch as beſet the whole human ſpecies; ſo that every man is in danger from them. They ariſe from principles of the human conſtitution, which are highly uſeful and neceſſary in our preſent ſtate; but, by their exceſs or defect, or wrong direction, may lead us into error.

As the active principles of the human frame are wiſely contrived by the Author of our being for the direction of our actions, and yet, without proper regulation and reſtraint, are apt to lead us wrong; ſo it is alſo with regard to thoſe parts of our conſtitution that have influence upon our opinions. Of this we may take the following inſtances:

1. *Firſt*, Men are prone to be led too much by authority in their opinions.

In the firſt part of life we have no other guide; and without a diſpoſition to receive implicitly what we are taught, we ſhould be incapable of inſtruction, and incapable of improvement.

When judgment is ripe, there are many things in which we are incompetent judges. In ſuch matters, it is moſt reaſonable to rely upon the judgment of thoſe whom we believe to be competent and diſintereſted. The higheſt court of judicature in the nation relies upon the authority of lawyers and phyſicians in matters belonging to their reſpective profeſſions.

Even in matters which we have acceſs to know, authority always will have, and ought to have more or leſs weight, in proportion to the evidence on which our own judgment reſts, and the opinion we have of the judgment and candour of thoſe who differ from us, or agree with us. The modeſt man, conſcious of his own fallibility

CHAP. VIII. libility in judging, is in danger of giving too much to authority; the arrogant of giving too little.

In all matters belonging to our cogniſance, every man muſt be determined by his own final judgment, otherwiſe he does not act the part of a rational being. Authority may add weight to one ſcale; but the man holds the balance, and judges what weight he ought to allow to authority.

If a man ſhould even claim infallibility, we muſt judge of his title to that prerogative. If a man pretend to be an Ambaſſador from heaven, we muſt judge of his credentials. No claim can deprive us of this right, or excuſe us for neglecting to exerciſe it.

As therefore our regard to authority may be either too great or too ſmall, the bias of human nature ſeems to lean to the firſt of theſe extremes; and I believe it is good for men in general that it ſhould do ſo.

When this bias concurs with an indifference about truth, its operation will be the more powerful.

The love of truth is natural to man, and ſtrong in every well-diſpoſed mind. But it may be overborn by party-zeal, by vanity, by the deſire of victory, or even by lazineſs. When it is ſuperior to theſe, it is a manly virtue, and requires the exerciſe of induſtry, fortitude, ſelf-denial, candour, and openneſs to conviction.

As there are perſons in the world of ſo mean and abject a ſpirit, that they rather chuſe to owe their ſubſiſtence to the charity of others, than by induſtry to acquire ſome property of their own; ſo there are many more who may be called mere beggars with regard to their opinions. Through lazineſs and indifference about truth, they leave to others the drudgery of digging for this commodity; they can have enough at ſecond hand to ſerve their occaſions.

caſions. Their concern is not to know what is true, but what is ſaid and thought on ſuch ſubjects; and their underſtanding, like their clothes, is cut according to the faſhion. CHAP. VIII.

This diſtemper of the underſtanding has taken ſo deep root in a great part of mankind, that it can hardly be ſaid that they uſe their own judgment in things that do not concern their temporal intereſt; nor is it peculiar to the ignorant; it infects all ranks. We may gueſs their opinions when we know where they were born, of what parents, how educated, and what company they have kept. Theſe circumſtances determine their opinions in religion, in politics, and in philoſophy.

2. A *ſecond* general prejudice ariſes from a diſpoſition to meaſure things leſs known, and leſs familiar, by thoſe that are better known and more familiar.

This is the foundation of analogical reaſoning, to which we have a great proneneſs by nature, and to it indeed we owe a great part of our knowledge. It would be abſurd to lay aſide this kind of reaſoning altogether, and it is difficult to judge how far we may venture upon it. The bias of human nature is to judge from too ſlight analogies.

The objects of ſenſe engroſs our thoughts in the firſt part of life, and are moſt familiar through the whole of it. Hence in all ages men have been prone to attribute the human figure and human paſſions and frailties to ſuperior intelligences, and even to the Supreme Being.

There is a diſpoſition in men to materialize every thing, if I may be allowed the expreſſion; that is, to apply the notions we have of material objects to things of another nature. Thought is conſidered as analogous to motion in a body; and as bodies are put in motion by impulſes, and by impreſſions made upon them by

CHAP. VIII. by contiguous objects, we are apt to conclude that the mind is made to think by impreſſions made upon it, and that there muſt be ſome kind of contiguity between it and the objects of thought. Hence the theories of ideas and impreſſions have ſo generally prevailed.

Becauſe the moſt perfect works of human artiſts are made after a model, and of materials that before exiſted, the ancient Philoſophers univerſally believed that the world was made of a pre-exiſtent uncreated matter; and many of them, that there were eternal and uncreated models of every ſpecies of things which God made.

The miſtakes in common life, which are owing to this prejudice, are innumerable, and cannot eſcape the ſlighteſt obſervation. Men judge of other men by themſelves, or by the ſmall circle of their acquaintance. The ſelfiſh man thinks all pretences to benevolence and public ſpirit to be mere hypocriſy or ſelf-deceit. The generous and open hearted believe fair pretences too eaſily, and are apt to think men better than they really are. The abandoned and profligate can hardly be perſuaded that there is any ſuch thing as real virtue in the world. The ruſtic forms his notions of the manners and characters of men from thoſe of his country village, and is eaſily duped when he comes into a great city.

It is commonly taken for granted, that this narrow way of judging of men is to be cured only by an extenſive intercourſe with men of different ranks, profeſſions, and nations; and that the man whoſe acquaintance has been confined within a narrow circle, muſt have many prejudices and narrow notions, which a more extenſive intercourſe would have cured.

3. Men are often led into error by the love of ſimplicity, which diſpoſes us to reduce things to few principles, and to conceive a greater ſimplicity in nature than there really is.

To

To love ſimplicity, and to be pleaſed with it wherever we find it, is no imperfection, but the contrary. It is the reſult of good taſte. We cannot but be pleaſed to obſerve, that all the changes of motion produced by the colliſion of bodies, hard, ſoft, or elaſtic, are reducible to three ſimple laws of motion, which the induſtry of Philoſophers has diſcovered.

When we conſider what a prodigious variety of effects depend upon the law of gravitation; how many phænomena in the earth, ſea, and air, which, in all preceding ages, had tortured the wits of Philoſophers, and occaſioned a thouſand vain theories, are ſhown to be the neceſſary conſequences of this one law; how the whole ſyſtem of ſun, moon, planets, primary and ſecondary, and comets, are kept in order by it, and their ſeeming irregularities accounted for and reduced to accurate meaſure; the ſimplicity of the cauſe, and the beauty and variety of the effects, muſt give pleaſure to every contemplative mind. By this noble diſcovery, we are taken, as it were, behind the ſcene in this great drama of Nature, and made to behold ſome part of the art of the divine Author of this ſyſtem, which, before this diſcovery, eye had not ſeen, nor ear heard, nor had it entered into the heart of man to conceive.

There is, without doubt, in every work of Nature all the beautiful ſimplicity that is conſiſtent with the end for which it was made. But if we hope to diſcover how Nature brings about its ends, merely from this principle, that it operates in the ſimpleſt and beſt way, we deceive ourſelves, and forget that the wiſdom of Nature is more above the wiſdom of man, than man's wiſdom is above that of a child.

If a child ſhould ſit down to contrive how a city is to be fortified, or an army arranged in the day of battle, he would, no doubt, conjecture what, to his underſtanding, appeared the ſimpleſt and beſt way. But could he ever hit upon the true way? No ſurely. When he learns from fact how theſe effects are produced, he will then ſee how fooliſh his childiſh conjectures were.

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We may learn ſomething of the way in which Nature operates, from fact and obſervation; but if we conclude that it operates in ſuch a manner, only becauſe to our underſtanding, that appears to be the beſt and ſimpleſt manner, we ſhall always go wrong.

It was believed, for many ages, that all the variety of concrete bodies we find on this globe is reducible to four elements, of which they are compounded, and into which they may be reſolved. It was the ſimplicity of this theory, and not any evidence from fact, that made it to be ſo generally received; for the more it is examined, we find the leſs ground to believe it.

The Pythagoreans and Platoniſts were carried farther by the ſame love of ſimplicity. PYTHAGORAS, by his ſkill in mathematics, diſcovered, that there can be no more than five regular ſolid figures, terminated by plain ſurfaces, which are all ſimilar and equal; to wit, the tetrahedron, the cube, the octahedron, the dodecahedron, and the eicoſihedron. As Nature works in the moſt ſimple and regular way, he thought that all the elementary bodies muſt have one or other of thoſe regular figures; and that the diſcovery of the properties and relations of the regular ſolids would be a key to open the myſteries of Nature.

This notion of the Pythagoreans and Platoniſts has undoubtedly great beauty and ſimplicity. Accordingly it prevailed, at leaſt, to the time of EUCLID. He was a Platonic Philoſopher, and is ſaid to have wrote all the books of his Elements, in order to diſcover the properties and relations of the five regular ſolids. This ancient tradition of the intention of EUCLID in writing his Elements, is countenanced by the work itſelf. For the laſt books of the Elements treat of the regular ſolids, and all the preceding are ſubſervient to the laſt.

So that this moſt ancient mathematical work, which, for its admirable compoſition, has ſerved as a model to all ſucceeding writers

ters in mathematics, ſeems, like the two firſt books of NEWTON's *Principia*, to have been intended by its author to exhibit the mathematical principles of natural philoſophy.

It was long believed, that all the qualities of bodies, and all their medical virtues, were reducible to four; moiſture and dryneſs, heat and cold: And that there are only four temperaments of the human body; the ſanguine, the melancholy, the bilious, and the phlegmatic. The chemical ſyſtem, of reducing all bodies to ſalt, ſulphur, and mercury, was of the ſame kind. For how many ages did men believe, that the diviſion of all the objects of thought into ten categories, and of all that can be affirmed or denied of any thing, into five univerſals or predicables, were perfect enumerations?

The evidence from reaſon that could be produced for thoſe ſyſtems was next to nothing, and bore no proportion to the ground they gained in the belief of men; but they were ſimple and regular, and reduced things to a few principles; and this ſupplied their want of evidence.

Of all the ſyſtems we know, that of DES CARTES was moſt remarkable for its ſimplicity. Upon one propoſition, *I think*, he builds the whole fabric of human knowledge. And from mere matter, with a certain quantity of motion given it at firſt, he accounts for all the phænomena of the material world.

The phyſical part of this ſyſtem was mere hypotheſis. It had nothing to recommend it but its ſimplicity; yet it had force enough to overturn the ſyſtem of ARISTOTLE, after that ſyſtem had prevailed for more than a thouſand years.

The principle of gravitation, and other attracting and repelling forces, after Sir ISAAC NEWTON had given the ſtrongeſt evidence of their real exiſtence in Nature, were rejected by the great-

CHAP. VIII. eſt part of Europe for half a century, becauſe they could not be accounted for by matter and motion. So much were men enamoured with the ſimplicity of the Carteſian ſyſtem.

Nay, I apprehend, it was this love of ſimplicity, more than real evidence, that led NEWTON himſelf to ſay, in the preface to his Principia, ſpeaking of the phænomena of the material world, "Nam multa me movent ut nonnihil ſuſpicer, ea omnia ex viri- "bus quibuſdam pendere poſſe, quibus corporum particulæ, per "cauſas nondum cognitas, vel in ſe mutuo impelluntur, et ſecun- "dum figuras regulares cohærent, vel ab invicem fugantur et re- "cedunt." For certainly we have no evidence from fact, that all the phænomena of the material world are produced by attracting or repelling forces.

With his uſual modeſty, he propoſes it only as a ſlight ſuſpicion; and the ground of this ſuſpicion could only be, that he ſaw that many of the phænomena of Nature depended upon cauſes of this kind; and therefore was diſpoſed, from the ſimplicity of Nature, to think that all do.

When a real cauſe is diſcovered, the ſame love of ſimplicity leads men to attribute effects to it which are beyond its province.

A medicine that is found to be of great uſe in one diſtemper, commonly has its virtues multiplied, till it becomes a *panacea*. Thoſe who have lived long, can recollect many inſtances of this. In other branches of knowledge, the ſame thing often happens. When the attention of men is turned to any particular cauſe, by diſcovering it to have remarkable effects, they are in great danger of extending its influence, upon ſlight evidence, to things with which it has no connection. Such prejudices ariſe from the natural deſire of ſimplifying natural cauſes, and of accounting for many phænomena from the ſame principle.

4. One

4. One of the moſt copious ſources of error in philoſophy is the miſapplication of our nobleſt intellectual power to purpoſes for which it is incompetent.

Of all the intellectual powers of man, that of invention bears the higheſt price. It reſembles moſt the power of creation, and is honoured with that name.

We admire the man who ſhews a ſuperiority in the talent of finding the means of accompliſhing an end; who can, by a happy combination, produce an effect, or make a diſcovery beyond the reach of other men; who can draw important concluſions from circumſtances that commonly paſs unobſerved; who judges with the greateſt ſagacity of the deſigns of other men, and the conſequences of his own actions. To this ſuperiority of underſtanding we give the name of genius, and look up with admiration to every thing that bears the marks of it.

Yet this power, ſo highly valuable in itſelf, and ſo uſeful in the conduct of life, may be miſapplied; and men of genius, in all ages, have been prone to apply it to purpoſes for which it is altogether incompetent.

The works of men and the works of Nature are not of the ſame order. The force of genius may enable a man perfectly to comprehend the former, and to ſee them to the bottom. What is contrived and executed by one man may be perfectly underſtood by another man. With great probability, he may from a part conjecture the whole, or from the effects may conjecture the cauſes; becauſe they are effects of a wiſdom not ſuperior to his own.

But the works of Nature are contrived and executed by a wiſdom and power infinitely ſuperior to that of man; and when men attempt, by the force of genius, to diſcover the cauſes of the phænomena

CHAP. VIII.

phænomena of Nature, they have only the chance of going wrong more ingeniouſly. Their conjectures may appear very probable to beings no wiſer than themſelves; but they have no chance to hit the truth. They are like the conjectures of a child how a ſhip of war is built, and how it is managed at ſea.

Let the man of genius try to make an animal, even the meaneſt; to make a plant, or even a ſingle leaf of a plant, or feather of a bird; he will find that all his wiſdom and ſagacity can bear no compariſon with the wiſdom of Nature, nor his power with the power of Nature.

The experience of all ages ſhows how prone ingenious men have been to invent hypotheſes to explain the phænomena of Nature; how fond, by a kind of anticipation, to diſcover her ſecrets. Inſtead of a ſlow and gradual aſcent in the ſcale of natural cauſes, by a juſt and copious induction, they would ſhorten the work, and, by a flight of genius, get to the top at once. This gratifies the pride of human underſtanding; but it is an attempt beyond our force, like that of PHAETON to guide the chariot of the ſun.

When a man has laid out all his ingenuity in fabricating a ſyſtem, he views it with the eye of a parent; he ſtrains phænomena to make them tally with it, and make it look like the work of Nature.

The ſlow and patient method of induction, the only way to attain any knowledge of Nature's work, was little underſtood until it was delineated by Lord BACON, and has been little followed ſince. It humbles the pride of man, and puts him conſtantly in mind that his moſt ingenious conjectures with regard to the works of God are pitiful and childiſh.

There is no room here for the favourite talent of invention. In the humble method of information, from the great volume of Nature

ture we muſt receive all our knowledge of Nature. Whatever is beyond a juſt interpretation of that volume is the work of man; and the work of God ought not to be contaminated by any mixture with it. CHAP. VIII.

To a man of genius, ſelf-denial is a difficult leſſon in philoſophy as well as in religion. To bring his fine imaginations and moſt ingenious conjectures to the fiery trial of experiment and induction, by which the greater part, if not the whole, will be found to be droſs, is a humiliating taſk. This is to condemn him to dig in a mine, when he would fly with the wings of an eagle.

In all the fine arts, whoſe end is to pleaſe, genius is deſervedly ſupreme. In the conduct of human affairs it often does wonders; but in all enquiries into the conſtitution of Nature it muſt act a ſubordinate part, ill-ſuited to the ſuperiority it boaſts. It may combine, but it muſt not fabricate. It may collect evidence, but muſt not ſupply the want of it by conjecture. It may diſplay its powers by putting Nature to the queſtion in well-contrived experiments, but it muſt add nothing to her anſwers.

5. In avoiding one extreme, men are very apt to ruſh into the oppoſite.

Thus, in rude ages, men, unaccuſtomed to ſearch for natural cauſes, aſcribe every uncommon appearance to the immediate interpoſition of inviſible beings; but when philoſophy has diſcovered natural cauſes of many events, which, in the days of ignorance, were aſcribed to the immediate operation of gods or dæmons, they are apt to think, that all the phænomena of Nature may be accounted for in the ſame way, and that there is no need of an inviſible Maker and Governor of the world.

Rude men are at firſt diſpoſed to aſcribe intelligence and active power to every thing they ſee move or undergo any change. "Savages,

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" vages, ſays the Abbé RAYNAL, wherever they ſee motion which " they cannot account for, there they ſuppoſe a ſoul." When they come to be convinced of the folly of this extreme, they are apt to run into the oppoſite, and to think that every thing moves only as it is moved, and acts as it is acted upon.

Thus, from the extreme of ſuperſtition, the tranſition is eaſy to that of atheiſm; and from the extreme of aſcribing activity to every part of Nature, to that of excluding it altogether, and making even the determinations of intelligent beings, the links of one fatal chain, or the wheels of one great machine.

The abuſe of occult qualities in the Peripatetic philoſophy led DES CARTES and his followers to reject all occult qualities; to pretend to explain all the phænomena of Nature by mere matter and motion, and even to fix diſgrace upon the name of occult quality.

6. Mens judgments are often perverted by their affections and paſſions. This is ſo commonly obſerved, and ſo univerſally acknowledged, that it needs no proof nor illuſtration.

The ſecond claſs of idols in Lord BACON's diviſion are the *idola ſpecus*.

Theſe are prejudices which have their origin, not from the conſtitution of human nature, but from ſomething peculiar to the individual.

As in a cave objects vary in their appearance according to the form of the cave and the manner in which it receives the light, Lord BACON conceives the mind of every man to reſemble a cave, which has its particular form, and its particular manner of being enlightened; and, from theſe circumſtances, often gives falſe colours and a deluſive appearance to objects ſeen in it.

For

For this reaſon, he gives the name of *idola ſpecus* to thoſe prejudices which ariſe from the particular way in which a man has been trained, from his being addicted to ſome particular profeſſion, or from ſomething particular in the turn of his mind.

A man whoſe thoughts have been confined to a certain track by his profeſſion or manner of life, is very apt to judge wrong when he ventures out of that track. He is apt to draw every thing within the ſphere of his profeſſion, and to judge by its maxims of things that have no relation to it.

The mere Mathematician is apt to apply meaſure and calculation to things which do not admit of it. Direct and inverſe ratios have been applied by an ingenious author to meaſure human affections, and the moral worth of actions. An eminent Mathematician attempted to aſcertain by calculation, the ratio in which the evidence of facts muſt decreaſe in the courſe of time, and fixed the period when the evidence of the facts on which Chriſtianity is founded ſhall become evaneſcent, and when in conſequence no faith ſhall be found on the earth. I have ſeen a philoſophical diſſertation publiſhed by a very good Mathematician, wherein, in oppoſition to the ancient diviſion of things into ten categories, he maintains that there are no more, and can be no more than two categories, to wit, *data* and *quæſita*.

The ancient Chemiſts were wont to explain all the myſteries of Nature, and even of religion, by ſalt, ſulphur, and mercury.

Mr Locke, I think, mentions an eminent Muſician, who believed that God created the world in ſix days, and reſted the ſeventh, becauſe there are but ſeven notes in muſic. I knew one of that profeſſion, who thought that there could be only three parts in harmony, to wit, baſs, tenor, and treble; becauſe there are but three perſons in the Trinity.

CHAP. VIII. The learned and ingenious Dr HENRY MORE having very elaborately and methodically compiled his *Enchiridium Metaphyſicum*, and *Enchiridium Ethicum*, found all the diviſions and ſubdiviſions of both to be allegorically taught in the firſt chapter of Geneſis. Thus even very ingenious men are apt to make a ridiculous figure, by drawing into the track, in which their thoughts have long run, things altogether foreign to it.

Different perſons, either from temper or from education, have different tendencies of underſtanding, which, by their exceſs, are unfavourable to ſound judgment.

Some have an undue admiration of antiquity, and contempt of whatever is modern; others go as far into the contrary extreme. It may be judged, that the former are perſons who value themſelves upon their acquaintance with ancient authors, and the latter ſuch as have little knowledge of this kind.

Some are afraid to venture a ſtep out of the beaten track, and think it ſafeſt to go with the multitude; others are fond of ſingularities, and of every thing that has the air of paradox.

Some are deſultory and changeable in their opinions; others unduly tenacious. Moſt men have a predilection for the tenets of their ſect or party, and ſtill more for their own inventions.

The *idola fori* are the fallacies ariſing from the imperfections and the abuſe of language, which is an inſtrument of thought as well as of the communication of our thoughts.

Whether it be the effect of conſtitution or of habit, I will not take upon me to determine; but, from one or both of theſe cauſes, it happens, that no man can purſue a train of thought or reaſoning without the uſe of language. Words are the ſigns of our thoughts; and

and the ſign is ſo aſſociated with the thing ſignified, that the laſt can hardly preſent itſelf to the imagination, without drawing the other along with it. CHAP. VIII.

A man who would compoſe in any language, muſt think in that language. If he thinks in one language what he would expreſs in another, he thereby doubles his labour, and after all, his expreſſions will have more the air of a tranſlation than of an original.

This ſhows, that our thoughts take their colour in ſome degree from the language we uſe; and that, although language ought always to be ſubſervient to thought, yet thought muſt be at ſome times, and in ſome degree, ſubſervient to language.

As a ſervant that is extremely uſeful and neceſſary to his maſter, by degrees acquires an authority over him, ſo that the maſter muſt often yield to the ſervant; ſuch is the caſe with regard to language. Its intention is to be a ſervant to the underſtanding; but it is ſo uſeful and ſo neceſſary, that we cannot avoid being ſometimes led by it when it ought to follow. We cannot ſhake off this impediment, we muſt drag it along with us; and therefore muſt direct our courſe, and regulate our pace, as it permits.

Language muſt have many imperfections when applied to philoſophy, becauſe it was not made for that uſe. In the early periods of ſociety, rude and ignorant men uſe certain forms of ſpeech, to expreſs their wants, their deſires, and their tranſactions with one another. Their language can reach no farther than their ſpeculations and notions; and if their notions be vague and ill defined, the words by which they expreſs them muſt be ſo likewiſe.

It was a grand and noble project of Biſhop WILKINS, to invent a philoſophical language, which ſhould be free from the imperfections of vulgar languages. Whether this attempt will ever ſucceed,

CHAP. VIII. ſo far as to be generally uſeful, I ſhall not pretend to determine. The great pains taken by that excellent man in this deſign have hitherto produced no effect. Very few have ever entered minutely into his views; far leſs have his philoſophical language and his real character been brought into uſe.

He founds his philoſophical language and real character upon a ſyſtematical diviſion and ſubdiviſion of all the things which may be expreſſed by language, and, inſtead of the ancient diviſion into ten categories, has made forty categories, or *ſumma genera*. But whether this diviſion, though made by a very comprehenſive mind, will always ſuit the various ſyſtems that may be introduced, and all the real improvements that may be made in human knowledge, may be doubted. The difficulty is ſtill greater in the ſubdiviſions; ſo that it is to be feared, that this noble attempt of a great genius will prove abortive, until Philoſophers have the ſame opinions and the ſame ſyſtems in the various branches of human knowledge.

There is more reaſon to hope, that the languages uſed by Philoſophers may be gradually improved in copiouſneſs and in diſtinctneſs; and that improvements in knowledge and in language may go hand in hand, and facilitate each other. But I fear the imperfections of language can never be perfectly remedied while our knowledge is imperfect.

However this may be, it is evident that the imperfections of language, and much more the abuſe of it, are the occaſion of many errors; and that in many diſputes which have engaged learned men, the difference has been partly, and in ſome wholly, about the meaning of words.

Mr LOCKE found it neceſſary to employ a fourth part of his Eſſay on Human Underſtanding about words; their various kinds; their imperfection and abuſe, and the remedies of both; and has made

made many obſervations upon theſe ſubjects, well worthy of attentive peruſal. CHAP. VIII.

The fourth claſs of prejudices are the *idola theatri*, by which are meant prejudices ariſing from the ſyſtems or ſects, in which we have been trained, or which we have adopted.

A falſe ſyſtem once fixed in the mind, becomes, as it were, the medium through which we ſee objects: They receive a tincture from it, and appear of another colour than when ſeen by a pure light.

Upon the ſame ſubject, a Platoniſt, a Peripatetic, and an Epicurean, will think differently, not only in matters connected with his peculiar tenets, but even in things remote from them.

A judicious hiſtory of the different ſects of Philoſophers, and the different methods of philoſophiſing, which have obtained among mankind, would be of no ſmall uſe to direct men in the ſearch of truth. In ſuch a hiſtory, what would be of the greateſt moment is not ſo much a minute detail of the *dogmata* of each ſect, as a juſt delineation of the ſpirit of the ſect, and of that point of view in which things appeared to its founder. This was perfectly underſtood, and, as far as concerns the theories of morals, is executed with great judgment and candour by Dr SMITH in his Theory of moral ſentiments.

As there are certain temperaments of the body that diſpoſe a man more to one claſs of diſeaſes than to another; and, on the other hand, diſeaſes of that kind, when they happen by accident, are apt to induce the temperament that is ſuited to them; there is ſomething analogous to this in the diſeaſes of the underſtanding.

A certain complexion of underſtanding may diſpoſe a man to one

CHAP. VIII.

one ſyſtem of opinions more than to another; and, on the other hand, a ſyſtem of opinions, fixed in the mind by education or otherwiſe, gives that complexion to the underſtanding which is ſuited to them.

It were to be wiſhed, that the different ſyſtems that have prevailed could be claſſed according to their ſpirit, as well as named from their founders. Lord BACON has diſtinguiſhed falſe philoſophy into the ſophiſtical, the empirical, and the ſuperſtitious, and has made judicious obſervations upon each of theſe kinds. But I apprehend this ſubject deſerves to be treated more fully by ſuch a hand, if ſuch a hand can be found.

ESSAY

ESSAY VII.

OF REASONING.

CHAP. I.

Of Reaſoning in general, and of Demonſtration.

THE power of reaſoning is very nearly allied to that of judging; and it is of little conſequence in the common affairs of life to diſtinguiſh them nicely. On this account, the ſame name is often given to both. We include both under the name of reaſon. The aſſent we give to a propoſition is called judgment, whether the propoſition be ſelf-evident, or derive its evidence by reaſoning from other propoſitions.

Yet there is a diſtinction between reaſoning and judging. Reaſoning is the proceſs by which we paſs from one judgment to another which is the conſequence of it. Accordingly our judgments are diſtinguiſhed into intuitive, which are not grounded upon any preceding judgment, and diſcurſive, which are deduced from ſome preceding judgment by reaſoning.

In all reaſoning, therefore, there muſt be a propoſition inferred, and one or more from which it is inferred. And this power of inferring, or drawing a concluſion, is only another name for reaſoning;

CHAP. I. ſoning; the propoſition inferred being called the *concluſion*, and the propoſition, or propoſitions from which it is inferred, the *premiſes*.

Reaſoning may conſiſt of many ſteps; the firſt concluſion being a premiſe to a ſecond, that to a third, and ſo on, till we come to the laſt concluſion. A proceſs conſiſting of many ſteps of this kind, is ſo eaſily diſtinguiſhed from judgment, that it is never called by that name. But when there is only a ſingle ſtep to the concluſion, the diſtinction is leſs obvious, and the proceſs is ſometimes called judgment, ſometimes reaſoning.

It is not ſtrange, that, in common diſcourſe, judgment and reaſoning ſhould not be very nicely diſtinguiſhed, ſince they are in ſome caſes confounded even by Logicians. We are taught in logic, that judgment is expreſſed by one propoſition, but that reaſoning requires two or three. But ſo various are the modes of ſpeech, that what in one mode is expreſſed by two or three propoſitions, may in another mode be expreſſed by one. Thus I may ſay, *God is good; therefore good men ſhall be happy.* This is reaſoning, of that kind which Logicians call an enthymeme, conſiſting of an antecedent propoſition, and a concluſion drawn from it. But this reaſoning may be expreſſed by one propoſition, thus: *Becauſe God is good, good men ſhall be happy.* This is what they call a cauſal propoſition, and therefore expreſſes judgment; yet the enthymeme which is reaſoning, expreſſes no more.

Reaſoning, as well as judgment, muſt be true or falſe; both are grounded upon evidence which may be probable or demonſtrative, and both are accompanied with aſſent or belief.

The power of reaſoning is juſtly accounted one of the prerogatives of human nature; becauſe by it many important truths have been, and may be diſcovered, which without it would be beyond our reach; yet it ſeems to be only a kind of crutch to a limited underſtanding.

underſtanding. We can conceive an underſtanding, ſuperior to human, to which that truth appears intuitively, which we can only diſcover by reaſoning. For this cauſe, though we muſt aſcribe judgment to the Almighty, we do not aſcribe reaſoning to him, becauſe it implies ſome defect or limitation of underſtanding. Even among men, to uſe reaſoning in things that are ſelf-evident, is trifling; like a man going upon crutches when he can walk upon his legs.

What reaſoning is, can be underſtood only by a man who has reaſoned, and who is capable of reflecting upon this operation of his own mind. We can define it only by ſynonimous words or phraſes, ſuch as inferring, drawing a concluſion, and the like. The very notion of reaſoning, therefore, can enter into the mind by no other channel than that of reflecting upon the operation of reaſoning in our own minds; and the notions of premiſes and concluſion, of a ſyllogiſm, and all its conſtituent parts, of an enthymeme, ſorites, demonſtration, paralogiſm, and many others, have the ſame origin.

It is Nature undoubtedly that gives us the capacity of reaſoning. When this is wanting, no art nor education can ſupply it. But this capacity may be dormant through life, like the ſeed of a plant, which, for want of heat and moiſture, never vegetates. This is probably the caſe of ſome ſavages.

Although the capacity be purely the gift of Nature, and probably given in very different degrees to different perſons; yet the power of reaſoning ſeems to be got by habit, as much as the power of walking or running. Its firſt exertions we are not able to recollect in ourſelves, or clearly to diſcern in others. They are very feeble, and need to be led by example, and ſupported by authority. By degrees it acquires ſtrength, chiefly by means of imitation and exerciſe.

The exerciſe of reaſoning on various ſubjects not only ſtrengthens

CHAP. I.

ens the faculty, but furniſhes the mind with a ſtore of materials. Every train of reaſoning, which is familiar, becomes a beaten track in the way to many others. It removes many obſtacles which lay in our way, and ſmooths many roads which we may have occaſion to travel in future diſquiſitions.

When men of equal natural parts apply their reaſoning power to any ſubject, the man who has reaſoned much on the ſame, or on ſimilar ſubjects, has a like advantage over him who has not, as the mechanic who has ſtore of tools for his work, has of him who has his tools to make, or even to invent.

In a train of reaſoning, the evidence of every ſtep, where nothing is left to be ſupplied by the reader or hearer, muſt be immediately diſcernible to every man of ripe underſtanding who has a diſtinct comprehenſion of the premiſes and concluſion, and who compares them together. To be able to comprehend, in one view, a combination of ſteps of this kind, is more difficult, and ſeems to require a ſuperior natural ability. In all, it may be much improved by habit.

But the higheſt talent in reaſoning is the invention of proofs; by which, truths remote from the premiſes are brought to light. In all works of underſtanding, invention has the higheſt praiſe; it requires an extenſive view of what relates to the ſubject, and a quickneſs in diſcerning thoſe affinities and relations which may be ſubſervient to the purpoſe.

In all invention there muſt be ſome end in view: And ſagacity in finding out the road that leads to this end, is, I think, what we call invention. In this chiefly, as I apprehend, and in clear and diſtinct conceptions, conſiſts that ſuperiority of underſtanding which we call *genius*.

In every chain of reaſoning, the evidence of the laſt concluſion can

can be no greater than that of the weakeſt link of the chain, whatever may be the ſtrength of the reſt.

The moſt remarkable diſtinction of reaſonings is, that ſome are probable, others demonſtrative.

In every ſtep of demonſtrative reaſoning, the inference is neceſſary, and we perceive it to be impoſſible that the concluſion ſhould not follow from the premiſes. In probable reaſoning, the connection between the premiſes and the concluſion is not neceſſary, nor do we perceive it to be impoſſible that the firſt ſhould be true while the laſt is falſe.

Hence demonſtrative reaſoning has no degrees, nor can one demonſtration be ſtronger than another, though, in relation to our faculties, one may be more eaſily comprehended than another. Every demonſtration gives equal ſtrength to the concluſion, and leaves no poſſibility of its being falſe.

It was, I think, the opinion of all the ancients, that demonſtrative reaſoning can be applied only to truths that are neceſſary, and not to thoſe that are contingent. In this, I believe, they judged right. Of all created things, the exiſtence, the attributes, and conſequently the relations reſulting from thoſe attributes, are contingent. They depend upon the will and power of him who made them. Theſe are matters of fact, and admit not of demonſtration.

The field of demonſtrative reaſoning, therefore, is the various relations of things abſtract, that is, of things which we conceive, without regard to their exiſtence. Of theſe, as they are conceived by the mind, and are nothing but what they are conceived to be, we may have a clear and adequate comprehenſion. Their relations and attributes are neceſſary and immutable. They are the things to which the Pythagoreans and Platoniſts gave the name of ideas. I would beg leave to borrow this meaning of the word *idea* from

CHAP. I. thoſe ancient Philoſophers, and then I muſt agree with them, that ideas are the only objects about which we can reaſon demonſtratively.

There are many even of our ideas about which we can carry on no conſiderable train of reaſoning. Though they be ever ſo well defined and perfectly comprehended, yet their agreements and diſagreements are few, and theſe are diſcerned at once. We may go a ſtep or two in forming a concluſion with regard to ſuch objects, but can go no farther. There are others, about which we may, by a long train of demonſtrative reaſoning, arrive at concluſions very remote and unexpected.

The reaſonings I have met with that can be called ſtrictly demonſtrative, may, I think, be reduced to two claſſes. They are either metaphyſical, or they are mathematical.

In metaphyſical reaſoning, the proceſs is always ſhort. The concluſion is but a ſtep or two, ſeldom more, from the firſt principle or axiom on which it is grounded, and the different concluſions depend not one upon another.

It is otherwiſe in mathematical reaſoning. Here the field has no limits. One propoſition leads on to another, that to a third, and ſo on without end.

If it ſhould be aſked, why demonſtrative reaſoning has ſo wide a field in mathematics, while, in other abſtract ſubjects, it is confined within very narrow limits? I conceive this is chiefly owing to the nature of quantity, the object of mathematics.

Every quantity, as it has magnitude, and is diviſible into parts without end, ſo, in reſpect of its magnitude, it has a certain ratio to every quantity of the kind. The ratios of quantities are innumerable, ſuch as, a half, a third, a tenth, double, triple. All the powers

powers of number are inſufficient to expreſs the variety of ratios. For there are innumerable ratios which cannot be perfectly expreſſed by numbers, ſuch as, the ratio of the ſide to the diagonal of a ſquare, of the circumference of a circle to the diameter. Of this infinite variety of ratios, every one may be clearly conceived, and diſtinctly expreſſed, ſo as to be in no danger of being miſtaken for any other.

Extended quantities, ſuch as lines, ſurfaces, ſolids, beſides the variety of relations they have in reſpect of magnitude, have no leſs variety in reſpect of figure; and every mathematical figure may be accurately defined, ſo as to diſtinguiſh it from all others.

There is nothing of this kind in other objects of abſtract reaſoning. Some of them have various degrees; but theſe are not capable of meaſure, nor can be ſaid to have an aſſignable ratio to others of the kind. They are either ſimple, or compounded of a few indiviſible parts; and therefore, if we may be allowed the expreſſion, can touch only in few points. But mathematical quantities being made up of parts without number, can touch in innumerable points, and be compared in innumerable different ways.

There have been attempts made to meaſure the merit of actions by the ratios of the affections and principles of action from which they proceed. This may perhaps, in the way of analogy, ſerve to illuſtrate what was before known; but I do not think any truth can be diſcovered in this way. There are, no doubt, degrees of benevolence, ſelf-love, and other affections; but, when we apply ratios to them, I apprehend we have no diſtinct meaning.

Some demonſtrations are called direct, others indirect. The firſt kind leads directly to the concluſion to be proved. Of the indirect ſome are called demonſtrations *ad abſurdum*. In theſe the propoſition contradictory to that which is to be proved is demonſtrated to be falſe, or to lead to an abſurdity; whence it follows, that

CHAP. I. that its contradictory, that is, the propoſition to be proved, is true. This inference is grounded upon an axiom in logic, That of two contradictory propoſitions, if one be falſe, the other muſt be true.

Another kind of indirect demonſtration proceeds by enumerating all the ſuppoſitions that can poſſibly be made concerning the propoſition to be proved, and then demonſtrating, that all of them, excepting that which is to be proved, are falſe; whence it follows, that the excepted ſuppoſition is true. Thus one line is proved to be equal to another, by proving firſt that it cannot be greater, and then that it cannot be leſs: For it muſt be either greater, or leſs, or equal; and two of theſe ſuppoſitions being demonſtrated to be falſe, the third muſt be true.

All theſe kinds of demonſtration are uſed in mathematics, and perhaps ſome others. They have all equal ſtrength. The direct demonſtration is preferred where it can be had, for this reaſon only, as I apprehend, becauſe it is the ſhorteſt road to the concluſion. The nature of the evidence and its ſtrength is the ſame in all: Only we are conducted to it by different roads.

CHAP. II.

Whether Morality be capable of Demonſtration.

WHAT has been ſaid of demonſtrative reaſoning may help us to judge of an opinion of Mr LOCKE, advanced in ſeveral places of his Eſſay; to wit, "That morality is capable of demonſtration as well as mathematics."

In book 3. chap. 11. having obſerved, that mixed modes, eſpecially thoſe belonging to morality, being ſuch combinations of ideas as the mind puts together of its own choice, the ſignification of their names may be perfectly and exactly defined, he adds,

Sect.

Sect. 16. "Upon this ground it is that I am bold to think, that "morality is capable of demonſtration as well as mathematics: "Since the preciſe real eſſence of the things moral words ſtand "for may be perfectly known, and ſo the congruity or incon- "gruity of the things themſelves be certainly diſcovered, in which "conſiſts perfect knowledge. Nor let any one object, That the "names of ſubſtances are often to be made uſe of in morality, as "well as thoſe of modes, from which will ariſe obſcurity: For, "as to ſubſtances, when concerned in moral diſcourſes, their di- "vers natures are not ſo much enquired into as ſuppoſed: *v. g.* "When we ſay that man is ſubject to law, we mean nothing by "man but a corporeal rational creature: What the real eſſence "or other qualities of that creature are, in this caſe, is no way "conſidered."

Again, in book 4. ch. 3. § 18. "The idea of a Supreme Being, "whoſe workmanſhip we are, and the idea of ourſelves, being "ſuch as are clear in us, would, I ſuppoſe, if duly conſidered and "purſued, afford ſuch foundation of our duty and rules of action, "as might place morality among the ſciences capable of demon- "ſtration. The relation of other modes may certainly be per- "ceived, as well as thoſe of number and extenſion; and I cannot "ſee why they ſhould not be capable of demonſtration, if due "methods were thought on to examine or purſue their agreement "or diſagreement."

He afterwards gives as inſtances two propoſitions, as moral propoſitions of which we may be as certain as of any in mathematics; and conſiders at large what may have given the advantage to the ideas of quantity, and made them be thought more capable of certainty and demonſtration.

Again, in the 12th chapter of the ſame book, § 7, 8. "This I "think I may ſay, that if other ideas that are the real as well as "nominal eſſences of their ſeveral ſpecies, were purſued in the "way

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" way familiar to Mathematicians, they would carry our thoughts " farther, and with greater evidence and clearneſs, than poſſibly " we are apt to imagine. This gave me the confidence to advance " that conjecture which I ſuggeſt, chap. 3. *viz.* That morality is " capable of demonſtration as well as mathematics."

From theſe paſſages it appears, that this opinion was not a tranſient thought, but what he had revolved in his mind on different occaſions. He offers his reaſons for it, illuſtrates it by examples, and conſiders at length the cauſes that have led men to think mathematics more capable of demonſtration than the principles of morals.

Some of his learned correſpondents, particularly his friend Mr MOLYNEUX, urged and importuned him to compoſe a ſyſtem of morals according to the idea he had advanced in his Eſſay; and, in his anſwer to theſe ſolicitations, he only pleads other occupations, without ſuggeſting any change of his opinion, or any great difficulty in the execution of what was deſired.

The reaſon he gives for this opinion is ingenious; and his regard for virtue, the higheſt prerogative of the human ſpecies, made him fond of an opinion which ſeemed to be favourable to virtue, and to have a juſt foundation in reaſon.

We need not, however, be afraid, that the intereſt of virtue may ſuffer by a free and candid examination of this queſtion, or indeed of any queſtion whatever. For the intereſts of truth and of virtue can never be found in oppoſition. Darkneſs and error may befriend vice, but can never be favourable to virtue.

Thoſe Philoſophers who think that our determinations in morals are not real judgments, that right and wrong in human conduct are only certain feelings or ſenſations in the perſon who contemplates the action, muſt reject Mr LOCKE's opinion without examination.

nation. For if the principles of morals be not a matter of judgment, but of feeling only, there can be no demonſtration of them; nor can any other reaſon be given for them, but that men are ſo conſtituted by the Author of their being, as to contemplate with pleaſure the actions we call virtuous, and with diſguſt thoſe we call vicious.

It is not therefore to be expected, that the Philoſophers of this claſs ſhould think this opinion of Mr LOCKE worthy of examination, ſince it is founded upon what they think a falſe hypotheſis. But if our determinations in morality be real judgments, and, like all other judgments, be either true or falſe, it is not unimportant to underſtand upon what kind of evidence thoſe judgments reſt.

The argument offered by Mr LOCKE, to ſhow that morality is capable of demonſtration, is, "That the preciſe real eſſence of "the things moral words ſtand for, may be perfectly known, and "ſo the congruity or incongruity of the things themſelves be per-"fectly diſcovered, in which conſiſts perfect knowledge."

It is true, that the field of demonſtration is the various relations of things conceived abſtractly, of which we may have perfect and adequate conceptions. And Mr LOCKE, taking all the things which moral words ſtand for to be of this kind, concluded that morality is as capable of demonſtration as mathematics.

I acknowledge, that the names of the virtues and vices, of right and obligation, of liberty and property, ſtand for things abſtract, which may be accurately defined, or, at leaſt, conceived as diſtinctly and adequately as mathematical quantities. And thence indeed it follows, that their mutual relations may be perceived as clearly and certainly as mathematical truths.

Of this Mr LOCKE gives two pertinent examples: The firſt,

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" where there is no property, there is no injuſtice, is, ſays he, a " propoſition as certain as any demonſtration in EUCLID."

When injuſtice is defined to be a violation of property, it is as neceſſary a truth, that there can be no injuſtice where there is no property, as that you cannot take from a man that which he has not.

The ſecond example is, " That no government allows abſolute " liberty." This is a truth no leſs certain and neceſſary.

Such abſtract truths I would call metaphyſical rather than moral. We give the name of mathematical, to truths that expreſs the relations of quantities conſidered abſtractly; all other abſtract truths may be called metaphyſical. But if thoſe mentioned by Mr LOCKE are to be called moral truths, I agree with him that there are many ſuch that are neceſſarily true, and that have all the evidence that mathematical truths can have.

It ought however to be remembered, that, as was before obſerved, the relations of things abſtract, perceivable by us, excepting thoſe of mathematical quantities, are few, and for the moſt part immediately diſcerned, ſo as not to require that train of reaſoning which we call demonſtration. Their evidence reſembles more that of mathematical axioms than mathematical propoſitions.

This appears in the two propoſitions given as examples by Mr LOCKE. The firſt follows immediately from the definition of injuſtice; the ſecond from the definition of government. Their evidence may more properly be called intuitive than demonſtrative: And this I apprehend to be the caſe, or nearly the caſe of all abſtract truths that are not mathematical, for the reaſon given in the laſt chapter.

The propoſitions which I think are properly called moral, are thoſe

thoſe that affirm ſome moral obligation to be, or not to be incumbent on one or more individual perſons. To ſuch propoſitions Mr LOCKE's reaſoning does not apply, becauſe the ſubjects of the propoſition are not things whoſe real eſſence may be perfectly known. They are the creatures of God; their obligation reſults from the conſtitution which God hath given them, and the circumſtances in which he hath placed them. That an individual hath ſuch a conſtitution, and is placed in ſuch circumſtances, is not an abſtract and neceſſary, but a contingent truth. It is a matter of fact, and therefore not capable of demonſtrative evidence, which belongs only to neceſſary truths.

The evidence which every man hath of his own exiſtence, though it be irreſiſtible, is not demonſtrative. And the ſame thing may be ſaid of the evidence which every man hath, that he is a moral agent, and under certain moral obligations. In like manner, the evidence we have of the exiſtence of other men is not demonſtrative; nor is the evidence we have of their being endowed with thoſe faculties which make them moral and accountable agents.

If man had not the faculty given him by God of perceiving certain things in conduct to be right, and others to be wrong, and of perceiving his obligation to do what is right, and not to do what is wrong, he would not be a moral and accountable being.

If man be endowed with ſuch a faculty, there muſt be ſome things, which, by this faculty, are immediately diſcerned to be right, and others to be wrong; and therefore there muſt be in morals, as in other ſciences, firſt principles, which do not derive their evidence from any antecedent principles, but may be ſaid to be intuitively diſcerned.

Moral truths, therefore, may be divided into two claſſes, to wit, ſuch as are ſelf-evident to every man whoſe underſtanding and moral faculty are ripe, and ſuch as are deduced by reaſoning from

CHAP. II. thoſe that are ſelf-evident. If the firſt be not diſcerned without reaſoning, the laſt never can be ſo by any reaſoning.

If any man could ſay with ſincerity, that he is conſcious of no obligation to conſult his own preſent and future happineſs; to be faithful to his engagements; to obey his Maker; to injure no man; I know not what reaſoning, either probable or demonſtrative, I could uſe to convince him of any moral duty. As you cannot reaſon in mathematics with a man who denies the axioms, as little can you reaſon with a man in morals who denies the firſt principles of morals. The man who does not, by the light of his own mind, perceive ſome things in conduct to be right, and others to be wrong, is as incapable of reaſoning about morals as a blind man is about colours. Such a man, if any ſuch man ever was, would be no moral agent, nor capable of any moral obligation.

Some firſt principles of morals muſt be immediately diſcerned, otherwiſe we have no foundation on which others can reſt, or from which we can reaſon.

Every man knows certainly, that, what he approves in other men he ought to do in like circumſtances, and that he ought not to do what he condemns in other men. Every man knows that he ought, with candour, to uſe the beſt means of knowing his duty. To every man who has a conſcience, theſe things are ſelf-evident. They are immediate dictates of our moral faculty, which is a part of the human conſtitution; and every man condemns himſelf, whether he will or not, when he knowingly acts contrary to them. The evidence of theſe fundamental principles of morals, and of others that might be named, appears therefore to me to be intuitive rather than demonſtrative.

The man who acts according to the dictates of his conſcience, and takes due pains to be rightly informed of his duty, is a perfect man with regard to morals, and merits no blame, whatever may

may be the imperfections or errors of his underſtanding. He who knowingly acts contrary to them is conſcious of guilt, and ſelf-condemned. Every particular action that falls evidently within the fundamental rules of morals is evidently his duty; and it requires no reaſoning to convince him that it is ſo.

Thus I think it appears, that every man of common underſtanding knows certainly, and without reaſoning, the ultimate ends he ought to purſue, and that reaſoning is neceſſary only to diſcover the moſt proper means of attaining them; and in this, indeed, a good man may often be in doubt.

Thus, a Magiſtrate knows that it is his duty to promote the good of the community which hath entruſted him with authority; and to offer to prove this to him by reaſoning would be to affront him. But whether ſuch a ſcheme of conduct in his office, or another, may beſt ſerve that end, he may in many caſes be doubtful. I believe, in ſuch caſes, he can very rarely have demonſtrative evidence. His conſcience determines the end he ought to purſue, and he has intuitive evidence that his end is good; but prudence muſt determine the means of attaining that end; and prudence can very rarely uſe demonſtrative reaſoning, but muſt reſt in what appears moſt probable.

I apprehend, that in every kind of duty we owe to God or man, the caſe is ſimilar; that is, That the obligation of the moſt general rules of duty is ſelf-evident; that the application of thoſe rules to particular actions is often no leſs evident; and that, when it is not evident, but requires reaſoning, that reaſoning can very rarely be of the demonſtrative, but muſt be of the probable kind. Sometimes it depends upon the temper and talents and circumſtances of the man himſelf; ſometimes upon the character and circumſtances of others; ſometimes upon both; and theſe are things which admit not of demonſtration.

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Every man is bound to employ the talents which God hath given him to the beſt purpoſe; but if, through accidents which he could not foreſee, or ignorance which was invincible, they be leſs uſefully employed than they might have been, this will not be imputed to him by his righteous Judge.

It is a common and a juſt obſervation, that the man of virtue plays a ſurer game in order to obtain his end than the man of the world. It is not, however, becauſe he reaſons better concerning the means of attaining his end; for the children of this world are often wiſer in their generation than the children of light. But the reaſon of the obſervation is, that involuntary errors, unforeſeen accidents, and invincible ignorance, which affect deeply all the concerns of the preſent world, have no effect upon virtue or its reward.

In the common occurrences of life, a man of integrity, who hath exerciſed his moral faculty in judging what is right and what is wrong, ſees his duty without reaſoning, as he ſees the high way. The caſes that require reaſoning are few, compared with thoſe that require none; and a man may be very honeſt and virtuous who cannot reaſon, and who knows not what demonſtration means.

The power of reaſoning, in thoſe that have it, may be abuſed in morals, as in other matters. To a man who uſes it with an upright heart, and a ſingle eye to find what is his duty, it will be of great uſe; but when it is uſed to juſtify what a man has a ſtrong inclination to do, it will only ſerve to deceive himſelf and others. When a man can reaſon, his paſſions will reaſon, and they are the moſt cunning ſophiſts we meet with.

If the rules of virtue were left to be diſcovered by demonſtrative reaſoning, or by reaſoning of any kind, ſad would be the condition of the far greater part of men, who have not the means of cultivating

vating the power of reaſoning. As virtue is the buſineſs of all men, the firſt principles of it are written in their hearts, in characters ſo legible, that no man can pretend ignorance of them, or of his obligation to practiſe them.

Some knowledge of duty and of moral obligation is neceſſary to all men. Without it they could not be moral and accountable creatures, nor capable of being members of civil ſociety. It may therefore be preſumed, that Nature has put this knowledge within the reach of all men. Reaſoning and demonſtration are weapons which the greateſt part of mankind never was able to wield. The knowledge that is neceſſary to all, muſt be attainable by all. We ſee it is ſo in what pertains to the natural life of man.

Some knowledge of things that are uſeful, and things that are hurtful, is ſo neceſſary to all men, that without it the ſpecies would ſoon periſh. But it is not by reaſoning that this knowledge is got, far leſs by demonſtrative reaſoning. It is by our ſenſes, by memory, by experience, by information; means of knowledge that are open to all men, and put the learned and the unlearned, thoſe who can reaſon and thoſe who cannot, upon a level.

It may, therefore, be expected from the analogy of nature, that ſuch a knowledge of morals as is neceſſary to all men, ſhould be had by means more ſuited to the abilities of all men than demonſtrative reaſoning is.

This, I apprehend, is in fact the caſe. When mens faculties are ripe, the firſt principles of morals, into which all moral reaſoning may be reſolved, are perceived intuitively, and in a manner more analogous to the perceptions of ſenſe than to the concluſions of demonſtrative reaſoning.

Upon the whole, I agree with Mr LOCKE, that propoſitions expreſſing the congruities and incongruities of things abſtract, which moral

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moral words ſtand for, may have all the evidence of mathematical truths. But this is not peculiar to things which moral words ſtand for. It is common to abſtract propoſitions of every kind. For inſtance, you cannot take from a man what he has not. A man cannot be bound and perfectly free at the ſame time. I think no man will call theſe moral truths, but they are neceſſary truths, and as evident as any in mathematics. Indeed, they are very nearly allied to the two which Mr LOCKE gives as inſtances of moral propoſitions capable of demonſtration. Of ſuch abſtract propoſitions, I think it may more properly be ſaid, that they have the evidence of mathematical axioms, than that they are capable of demonſtration.

There are propoſitions of another kind, which alone deſerve the name of moral propoſitions. They are ſuch as affirm ſomething to be the duty of perſons that really exiſt. Theſe are not abſtract propoſitions; and therefore Mr LOCKE's reaſoning does not apply to them. The truth of all ſuch propoſitions depends upon the conſtitution and circumſtances of the perſons to whom they are applied.

Of ſuch propoſitions, there are ſome that are ſelf-evident to every man that has a conſcience; and theſe are the principles from which all moral reaſoning muſt be drawn. They may be called the axioms of morals. But our reaſoning from theſe axioms to any duty that is not ſelf-evident, can very rarely be demonſtrative. Nor is this any detriment to the cauſe of virtue, becauſe to act againſt what appears moſt probable in a matter of duty, is as real a treſpaſs againſt the firſt principles of morality, as to act againſt demonſtration; and becauſe he who has but one talent in reaſoning, and makes the proper uſe of it, ſhall be accepted, as well as he to whom God has given ten.

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Of probable Reaſoning.

THE field of demonſtration, as has been obſerved, is neceſſary truth; the field of probable reaſoning is contingent truth, not what neceſſarily muſt be at all times, but what is, or was, or ſhall be.

No contingent truth is capable of ſtrict demonſtration; but neceſſary truths may ſometimes have probable evidence.

Dr WALLIS diſcovered many important mathematical truths, by that kind of induction which draws a general concluſion from particular premiſes. This is not ſtrict demonſtration, but, in ſome caſes, gives as full conviction as demonſtration itſelf; and a man may be certain, that a truth is demonſtrable before it ever has been demonſtrated. In other caſes, a mathematical propoſition may have ſuch probable evidence from induction or analogy, as encourages the Mathematician to inveſtigate its demonſtration. But ſtill the reaſoning proper to mathematical and other neceſſary truths, is demonſtration; and that which is proper to contingent truths, is probable reaſoning.

Theſe two kinds of reaſoning differ in other reſpects. In demonſtrative reaſoning, one argument is as good as a thouſand. One demonſtration may be more elegant than another; it may be more eaſily comprehended, or it may be more ſubſervient to ſome purpoſe beyond the preſent. On any of theſe accounts it may deſerve a preference: But then it is ſufficient by itſelf; it needs no aid from another; it can receive none. To add more demonſtrations of the ſame concluſion, would be a kind of tautology in reaſoning;

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ſoning; becauſe one demonſtration, clearly comprehended, gives all the evidence we are capable of receiving.

The ſtrength of probable reaſoning, for the moſt part, depends not upon any one argument, but upon many, which unite their force, and lead to the ſame concluſion. Any one of them by itſelf would be inſufficient to convince; but the whole taken together may have a force that is irreſiſtible, ſo that to deſire more evidence would be abſurd. Would any man ſeek new arguments to prove that there were ſuch perſons as King CHARLES the Firſt, or OLIVER CROMWELL?

Such evidence may be compared to a rope made up of many ſlender filaments twiſted together. The rope has ſtrength more than ſufficient to bear the ſtreſs laid upon it, though no one of the filaments of which it is compoſed would be ſufficient for that purpoſe.

It is a common obſervation, that it is unreaſonable to require demonſtration for things which do not admit of it. It is no leſs unreaſonable to require reaſoning of any kind for things which are known without reaſoning. All reaſoning muſt be grounded upon truths which are known without reaſoning. In every branch of real knowledge there muſt be firſt principles whoſe truth is known intuitively, without reaſoning, either probable or demonſtrative. They are not grounded on reaſoning, but all reaſoning is grounded on them. It has been ſhown, that there are firſt principles of neceſſary truths, and firſt principles of contingent truths. Demonſtrative reaſoning is grounded upon the former, and probable reaſoning upon the latter.

That we may not be embarraſſed by the ambiguity of words, it is proper to obſerve, that there is a popular meaning of *probable evidence*, which ought not to be confounded with the philoſophical meaning, above explained.

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In common language, probable evidence is conſidered as an inferior degree of evidence, and is oppoſed to certainty: So that what is certain is more than probable, and what is only probable is not certain. Philoſophers conſider probable evidence, not as a degree, but as a ſpecies of evidence which is oppoſed, not to certainty, but to another ſpecies of evidence called demonſtration.

Demonſtrative evidence has no degrees; but probable evidence, taken in the philoſophical ſenſe, has all degrees, from the very leaſt, to the greateſt which we call certainty.

That there is ſuch a city as Rome, I am as certain as of any propoſition in EUCLID; but the evidence is not demonſtrative, but of that kind which Philoſophers call probable. Yet, in common language, it would ſound oddly to ſay, it is probable there is ſuch a city as Rome, becauſe it would imply ſome degree of doubt or uncertainty.

Taking probable evidence, therefore, in the philoſophical ſenſe, as it is oppoſed to demonſtrative, it may have any degrees of evidence, from the leaſt to the greateſt.

I think, in moſt caſes, we meaſure the degrees of evidence by the effect they have upon a ſound underſtanding, when comprehended clearly and without prejudice. Every degree of evidence perceived by the mind, produces a proportioned degree of aſſent or belief. The judgment may be in perfect ſuſpenſe between two contradictory opinions, when there is no evidence for either, or equal evidence for both. The leaſt preponderancy on one ſide inclines the judgment in proportion. Belief is mixed with doubt, more or leſs, until we come to the higheſt degree of evidence, when all doubt vaniſhes, and the belief is firm and immoveable. This degree of evidence, the higheſt the human faculties can attain, we call certainty.

Probable evidence not only differs in kind from demonſtrative,

CHAP. III. but is itſelf of different kinds. The chief of theſe I ſhall mention, without pretending to make a complete enumeration.

The firſt kind is that of human teſtimony, upon which the greateſt part of human knowledge is built.

The faith of hiſtory depends upon it, as well as the judgment of ſolemn tribunals, with regard to mens acquired rights, and with regard to their guilt or innocence when they are charged with crimes. A great part of the buſineſs of the Judge, of Counſel at the bar, of the Hiſtorian, the Critic, and the Antiquarian, is to canvaſs and weigh this kind of evidence; and no man can act with common prudence in the ordinary occurrences of life, who has not ſome competent judgment of it.

The belief we give to teſtimony in many caſes is not ſolely grounded upon the veracity of the teſtifier. In a ſingle teſtimony, we conſider the motives a man might have to falſify. If there be no appearance of any ſuch motive, much more if there be motives on the other ſide, his teſtimony has weight independent of his moral character. If the teſtimony be circumſtantial, we conſider how far the circumſtances agree together, and with things that are known. It is ſo very difficult to fabricate a ſtory, which cannot be detected by a judicious examination of the circumſtances, that it acquires evidence, by being able to bear ſuch a trial. There is an art in detecting falſe evidence in judicial proceedings, well known to able judges and barriſters; ſo that I believe few falſe witneſſes leave the bar without ſuſpicion of their guilt.

When there is an agreement of many witneſſes, in a great variety of circumſtances, without the poſſibility of a previous concert, the evidence may be equal to that of demonſtration.

A ſecond kind of probable evidence, is the authority of thoſe who are good judges of the point in queſtion. The ſupreme court of

of judicature of the Britiſh nation, is often determined by the opinion of lawyers in a point of law, of phyſicians in a point of medicine, and of other artiſts, in what relates to their ſeveral profeſſions. And, in the common affairs of life, we frequently rely upon the judgment of others, in points of which we are not proper judges ourſelves.

A third kind of probable evidence, is that by which we recogniſe the identity of things, and perſons of our acquaintance: That two ſwords, two horſes, or two perſons, may be ſo perfectly alike, as not to be diſtinguiſhable by thoſe to whom they are beſt known, cannot be ſhown to be impoſſible. But we learn either from nature, or from experience, that it never happens; or ſo very rarely, that a perſon or thing, well known to us, is immediately recogniſed without any doubt, when we perceive the marks or ſigns by which we were in uſe to diſtinguiſh it from all other individuals of the kind.

This evidence we rely upon in the moſt important affairs of life; and, by this evidence, the identity, both of things and of perſons, is determined in courts of judicature.

A fourth kind of probable evidence, is that which we have of mens future actions and conduct, from the general principles of action in man, or from our knowledge of the individuals.

Notwithſtanding the folly and vice that is to be found among men, there is a certain degree of prudence and probity which we rely upon in every man that is not inſane. If it were not ſo, no man would be ſafe in the company of another, and there could be no ſociety among mankind. If men were as much diſpoſed to hurt as to do good, to lie as to ſpeak truth, they could not live together; they would keep at as great diſtance from one another as poſſible, and the race would ſoon periſh.

We

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We expect that men will take ſome care of themſelves, of their family, friends, and reputation: That they will not injure others without ſome temptation: That they will have ſome gratitude for good offices, and ſome reſentment of injuries.

Such maxims with regard to human conduct are the foundation of all political reaſoning, and of common prudence in the conduct of life. Hardly can a man form any project in public or in private life, which does not depend upon the conduct of other men, as well as his own, and which does not go upon the ſuppoſition that men will act ſuch a part in ſuch circumſtances. This evidence may be probable in a very high degree, but can never be demonſtrative. The beſt concerted project may fail, and wiſe counſels may be fruſtrated, becauſe ſome individual acted a part which it would have been againſt all reaſon to expect.

Another kind of probable evidence, the counterpart of the laſt, is that by which we collect mens characters and deſigns from their actions, ſpeech, and other external ſigns.

We ſee not mens hearts, nor the principles by which they are actuated; but there are external ſigns of their principles and diſpoſitions, which, though not certain, may ſometimes be more truſted than their profeſſions; and it is from external ſigns that we muſt draw all the knowledge we can attain of mens characters.

The next kind of probable evidence I mention, is that which Mathematicians call the probability of chances.

We attribute ſome events to chance, becauſe we know only the remote cauſe which muſt produce ſome one event of a number; but know not the more immediate cauſe which determines a particular event of that number in preference to the others.

I think all the chances about which we reaſon in mathematics are of this kind. Thus, in throwing a juſt die upon a table, we ſay it is an equal chance which of the ſix ſides ſhall be turned up; becauſe neither the perſon who throws, nor the byſtanders know the preciſe meaſure of force and direction neceſſary to turn up any one ſide rather than another. There are here therefore ſix events, one of which muſt happen; and as all are ſuppoſed to have equal probability, the probability of any one ſide being turned up, the ace, for inſtance, is as one to the remaining number five.

The probability of turning up two aces with two dice is as one to thirty-five; becauſe here there are thirty-ſix events, each of which has equal probability.

Upon ſuch principles as theſe, the doctrine of chances has furniſhed a field of demonſtrative reaſoning of great extent, although the events about which this reaſoning is employed be not neceſſary, but contingent, and be not certain, but probable.

This may ſeem to contradict a principle before advanced, that contingent truths are not capable of demonſtration; but it does not: For, in the mathematical reaſonings about chance, the concluſion demonſtrated, is not, that ſuch an event ſhall happen, but that the probability of its happening bears ſuch a ratio to the probability of its failing; and this concluſion is neceſſary upon the ſuppoſitions on which it is grounded.

The laſt kind of probable evidence I ſhall mention, is that by which the known laws of Nature have been diſcovered, and the effects which have been produced by them in former ages, or which may be expected in time to come.

The laws of Nature are the rules by which the Supreme Being governs the world. We deduce them only from facts that fall within our own obſervation, or are properly atteſted by thoſe who have obſerved them.

The

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The knowledge of ſome of the laws of Nature is neceſſary to all men in the conduct of life. Theſe are ſoon diſcovered even by ſavages. They know that fire burns, that water drowns, that bodies gravitate towards the earth. They know that day and night, ſummer and winter, regularly ſucceed each other. As far back as their experience and information reach, they know that theſe have happened regularly; and, upon this ground, they are led, by the conſtitution of human nature, to expect that they will happen in time to come, in like circumſtances.

The knowledge which the Philoſopher attains of the laws of Nature differs from that of the vulgar, not in the firſt principles on which it is grounded, but in its extent and accuracy. He collects with care the phænomena that lead to the ſame concluſion, and compares them with thoſe that ſeem to contradict or to limit it. He obſerves the circumſtances on which every phænomenon depends, and diſtinguiſhes them carefully from thoſe that are accidentally conjoined with it. He puts natural bodies in various ſituations, and applies them to one another in various ways, on purpoſe to obſerve the effect; and thus acquires from his ſenſes a more extenſive knowledge of the courſe of Nature in a ſhort time, than could be collected by caſual obſervation in many ages.

But what is the reſult of his laborious reſearches? It is, that, as far as he has been able to obſerve, ſuch things have always happened in ſuch circumſtances, and ſuch bodies have always been found to have ſuch properties. Theſe are matters of fact, atteſted by ſenſe, memory and teſtimony, juſt as the few facts which the vulgar know are atteſted to them.

And what concluſions does the Philoſopher draw from the facts he has collected? They are, that like events have happened in former times in like circumſtances, and will happen in time to come; and theſe concluſions are built on the very ſame ground on which the ſimple ruſtic concludes that the ſun will riſe to-morrow.

Facts

Facts reduced to general rules, and the conſequences of thoſe general rules, are all that we really know of the material world. And the evidence that ſuch general rules have no exceptions, as well as the evidence that they will be the ſame in time to come as they have been in time paſt, can never be demonſtrative. It is only that ſpecies of evidence which Philoſophers call probable. General rules may have exceptions or limitations which no man ever had occaſion to obſerve. The laws of Nature may be changed by him who eſtabliſhed them. But we are led by our conſtitution to rely upon their continuance with as little doubt as if it was demonſtrable.

I pretend not to have made a complete enumeration of all the kinds of probable evidence; but thoſe I have mentioned are ſufficient to ſhow, that the far greateſt part, and the moſt intereſting part of our knowledge, muſt reſt upon evidence of this kind; and that many things are certain for which we have only that kind of evidence which Philoſophers call probable.

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Of Mr HUME's *Scepticiſm with regard to Reaſon.*

IN the Treatiſe of Human Nature, book 1. part 4. ſect. 1. the author undertakes to prove two points: *Firſt*, That all that is called human knowledge (meaning demonſtrative knowledge) is only probability; and, *ſecondly*, That this probability, when duly examined, evaniſhes by degrees, and leaves at laſt no evidence at all: So that, in the iſſue, there is no ground to believe any one propoſition rather than its contrary, and "all thoſe are certainly "fools who reaſon or believe any thing."

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According to this account, reaſon, that boaſted prerogative of man, and the light of his mind, is an *ignis fatuus*, which miſleads the wandering traveller, and leaves him at laſt in abſolute darkneſs.

How unhappy is the condition of man, born under a neceſſity of believing contradictions, and of truſting to a guide who confeſſes herſelf to be a falſe one!

It is ſome comfort, that this doctrine can never be ſeriouſly adopted by any man in his ſenſes. And after this author had ſhown that "all the rules of logic require a total extinction of all "belief and evidence," he himſelf, and all men that are not inſane, muſt have believed many things, and yielded aſſent to the evidence which he had extinguiſhed.

This indeed he is ſo candid as to acknowledge. "He finds "himſelf abſolutely and neceſſarily determined, to live and talk "and act like other people in the common affairs of life. And "ſince reaſon is incapable of diſpelling theſe clouds, moſt fortu-"nately it happens, that Nature herſelf ſuffices to that purpoſe, "and cures him of this philoſophical melancholy and delirium." See ſect. 7.

This was ſurely a very kind and friendly interpoſition of Nature; for the effects of this philoſophical delirium, if carried into life, muſt have been very melancholy.

But what pity is it, that Nature (whatever is meant by that perſonage), ſo kind in curing this delirium, ſhould be ſo cruel as to cauſe it. Doth the ſame fountain ſend forth ſweet waters and bitter? Is it not more probable, that if the cure was the work of Nature, the diſeaſe came from another hand, and was the work of the Philoſopher?

To pretend to prove by reaſoning that there is no force in reaſon, does

does indeed look like a philoſophical delirium. It is like a man's pretending to ſee clearly, that he himſelf and all other men are blind. CHAP. IV.

A common ſymptom of delirium is, to think that all other men are fools or mad. This appears to have been the caſe of our author, who concluded, "That all thoſe are certainly fools who reaſon or believe any thing."

Whatever was the cauſe of this delirium, it muſt be granted, that if it was real and not feigned, it was not to be cured by reaſoning: For what can be more abſurd than to attempt to convince a man by reaſoning who diſowns the authority of reaſon. It was therefore very fortunate that Nature found other means of curing it.

It may, however, not be improper to enquire, whether, as the author thinks, it was produced by a juſt application of the rules of logic, or, as others may be apt to think, by the miſapplication and abuſe of them.

Firſt, Becauſe we are fallible, the author infers that all knowledge degenerates into probability.

That man, and probably every created being, is fallible; and that a fallible being cannot have that perfect comprehenſion and aſſurance of truth which an infallible being has, I think ought to be granted. It becomes a fallible being to be modeſt, open to new light, and ſenſible, that by ſome falſe bias, or by raſh judging, he may be miſled. If this be called a degree of ſcepticiſm, I cannot help approving of it, being perſuaded, that the man who makes the beſt uſe he can of the faculties which God has given him, without thinking them more perfect than they really are, may have all the belief that is neceſſary in the conduct of life, and all that is neceſſary to his acceptance with his Maker.

CHAP. IV. It is granted then, that human judgments ought always to be formed with an humble ſenſe of our fallibility in judging.

This is all that can be inferred by the rules of logic from our being fallible. And if this be all that is meant by our knowledge degenerating into probability, I know no perſon of a different opinion.

But it may be obſerved, that the author here uſes the word probability in a ſenſe for which I know no authority but his own. Philoſophers underſtand probability as oppoſed to demonſtration; the vulgar as oppoſed to certainty; but this author underſtands it as oppoſed to infallibility, which no man claims.

One who believes himſelf to be fallible may ſtill hold it to be certain that two and two make four, and that two contradictory propoſitions cannot both be true. He may believe ſome things to be probable only, and other things to be demonſtrable, without making any pretence to infallibility.

If we uſe words in their proper meaning, it is impoſſible that demonſtration ſhould degenerate into probability from the imperfection of our faculties. Our judgment cannot change the nature of the things about which we judge. What is really demonſtration, will ſtill be ſo, whatever judgment we form concerning it. It may likewiſe be obſerved, that when we miſtake that for demonſtration, which really is not, the conſequence of this miſtake is, not that demonſtration degenerates into probability, but that what we took to be demonſtration is no proof at all; for one falſe ſtep in a demonſtration deſtroys the whole, but cannot turn it into another kind of proof.

Upon the whole, then, this firſt concluſion of our author, That the fallibility of human judgment turns all knowledge into probability, if underſtood literally, is abſurd; but if it be only a figure

figure of ſpeech, and means no more, but that, in all our judg- CHAP. IV.
ments, we ought to be ſenſible of our fallibility, and ought to hold our opinions with that modeſty that becomes fallible creatures, which I take to be what the author meant, this, I think, nobody denies, nor was it neceſſary to enter into a laborious proof of it.

One is never in greater danger of tranſgreſſing againſt the rules of logic, than in attempting to prove what needs no proof. Of this we have an inſtance in this very caſe: For the author begins his proof, that all human judgments are fallible, with affirming that ſome are infallible.

" In all demonſtrative ſciences, ſays he, the rules are certain " and infallible; but when we apply them, our fallible and un- " certain faculties are very apt to depart from them, and fall into " error."

He had forgot, ſurely, that the rules of demonſtrative ſciences are diſcovered by our fallible and uncertain faculties, and have no authority but that of human judgment. If they be infallible, ſome human judgments are infallible; and there are many in various branches of human knowledge which have as good a claim to infallibility as the rules of the demonſtrative ſciences.

We have reaſon here to find fault with our author for not being ſceptical enough, as well as for a miſtake in reaſoning, when he claims infallibility to certain deciſions of the human faculties, in order to prove that all their deciſions are fallible.

The *ſecond* point which he attempts to prove, is, That this probability, when duly examined, ſuffers a continual diminution, and at laſt a total extinction.

The obvious conſequence of this is, that no fallible being can have good reaſon to believe any thing at all; but let us hear the proof.

" In

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" In every judgment, we ought to correct the firſt judgment " derived from the nature of the object, by another judgment de- " rived from the nature of the underſtanding. Beſide the origi- " nal uncertainty inherent in the ſubject, there ariſes another, de- " rived from the weakneſs of the faculty which judges. Having " adjuſted theſe two uncertainties together, we are obliged, by our " reaſon, to add a new uncertainty, derived from the poſſibility of " error in the eſtimation we make of the truth and fidelity of our " faculties. This is a doubt, of which, if we would cloſely pur- " ſue our reaſoning, we cannot avoid giving a deciſion. But this " deciſion, though it ſhould be favourable to our preceding judg- " ment, being founded only on probability, muſt weaken ſtill " farther our firſt evidence. The third uncertainty muſt in like " manner be criticiſed by a fourth, and ſo on without end.

" Now, as every one of theſe uncertainties takes away a part of " the original evidence, it muſt at laſt be reduced to nothing. Let " our firſt belief be ever ſo ſtrong, it muſt infallibly periſh, by " paſſing through ſo many examinations, each of which carries " off ſomewhat of its force and vigour. No finite object can ſub- " ſiſt under a decreaſe repeated *in infinitum.*

" When I reflect on the natural fallibility of my judgment, I " have leſs confidence in my opinions, than when I only conſider " the objects concerning which I reaſon. And when I proceed " ſtill farther, to turn the ſcrutiny againſt every ſucceſſive eſtima- " tion I make of my faculties, all the rules of logic require a con- " tinual diminution, and at laſt a total extinction of belief and " evidence."

This is the author's Achillean argument againſt the evidence of reaſon, from which he concludes, that a man who would govern his belief by reaſon, muſt believe nothing at all, and that belief is an act, not of the cogitative, but of the ſenſitive part of our nature.

If

If there be any ſuch thing as motion, (ſaid an ancient Sceptic) the ſwift-footed ACHILLES could never overtake an old man in a journey. For, ſuppoſe the old man to ſet out a thouſand paces before ACHILLES, and that while ACHILLES has travelled the thouſand paces, the old man has gone five hundred; when ACHILLES has gone the five hundred, the old man has gone two hundred and fifty; and when ACHILLES has gone the two hundred and fifty, the old man is ſtill one hundred and twenty-five before him. Repeat theſe eſtimations *in infinitum*, and you will ſtill find the old man foremoſt; therefore ACHILLES can never overtake him; therefore there can be no ſuch thing as motion.

The reaſoning of the modern Sceptic againſt reaſon is equally ingenious, and equally convincing. Indeed, they have a great ſimilarity.

If we trace the journey of ACHILLES two thouſand paces, we ſhall find the very point where the old man is overtaken: But this ſhort journey, by dividing it into an infinite number of ſtages, with correſponding eſtimations, is made to appear infinite. In like manner, our author, ſubjecting every judgment to an infinite number of ſucceſſive probable eſtimations, reduces the evidence to nothing.

To return then to the argument of the modern Sceptic. I examine the proof of a theorem of EUCLID. It appears to me to be ſtrict demonſtration. But I may have overlooked ſome fallacy; therefore I examine it again and again, but can find no flaw in it. I find all that have examined it agree with me. I have now that evidence of the truth of the propoſition, which I and all men call demonſtration, and that belief of it, which we call certainty.

Here my ſceptical friend interpoſes, and aſſures me, that the rules of logic reduce this demonſtration to no evidence at all. I am willing to hear what ſtep in it he thinks fallacious, and why.

He

CHAP. IV. He makes no objection to any part of the demonſtration, but pleads my fallibilty in judging. I have made the proper allowance for this already, by being open to conviction. But, ſays he, there are two uncertainties, the firſt inherent in the ſubject, which I have already ſhown to have only probable evidence; the ſecond ariſing from the weakneſs of the faculty that judges. I anſwer, It is the weakneſs of the faculty only that reduces this demonſtration to what you call probability. You muſt not therefore make it a ſecond uncertainty; for it is he ſame with the firſt. To take credit twice in an account for the ſame article is not agreeable to the rules of logic. Hitherto therefore there is but one uncertainty, to wit, my fallibility in judging.

But, ſays my friend, you are obliged by reaſon to add a new uncertainty, derived from the poſſibility of error in the eſtimation you make of the truth and fidelity of your faculties. I anſwer,

This eſtimation is ambiguouſly expreſſed; it may either mean an eſtimation of my liableneſs to err by the miſapplication and abuſe of my faculties; or it may mean an eſtimation of my liableneſs to err, by conceiving my faculties to be true and faithful, while they may be falſe and fallacious in themſelves, even when applied in the beſt manner. I ſhall conſider this eſtimation in each of theſe ſenſes.

If the firſt be the eſtimation meant, it is true that reaſon directs us, as fallible creatures, to carry along with us, in all our judgments, a ſenſe of our fallibility. It is true alſo, that we are in greater danger of erring in ſome caſes, and leſs in others; and that this danger of erring may, according to the circumſtances of the caſe, admit of an eſtimation, which we ought likewiſe to carry along with us in every judgment we form.

When a demonſtration is ſhort and plain; when the point to be proved does not touch our intereſt or our paſſions; when the faculty

ty of judging, in ſuch caſes, has acquired ſtrength by much exerciſe, there is leſs danger of erring; when the contrary circumſtances take place, there is more. CHAP. IV

In the preſent caſe, every circumſtance is favourable to the judgment I have formed. There cannot be leſs danger of erring in any caſe, excepting perhaps when I judge of a ſelf-evident axiom.

The Sceptic farther urges, that this deciſion, though favourable to my firſt judgment, being founded only on probability, muſt ſtill weaken the evidence of that judgment.

Here I cannot help being of a quite contrary opinion, nor can I imagine how an ingenious author could impoſe upon himſelf ſo groſsly, for ſurely he did not intend to impoſe upon his reader.

After repeated examination of a propoſition of EUCLID, I judge it to be ſtrictly demonſtrated; this is my firſt judgment. But as I am liable to err from various cauſes, I conſider how far I may have been miſled by any of theſe cauſes in this judgment. My deciſion upon this ſecond point is favourable to my firſt judgment, and therefore, as I apprehend, muſt ſtrengthen it. To ſay, that this deciſion, becauſe it is only probable, muſt weaken the firſt evidence, ſeems to me contrary to all rules of logic, and to common ſenſe.

The firſt judgment may be compared to the teſtimony of a credible witneſs; the ſecond, after a ſcrutiny into the character of the witneſs, wipes off every objection that can be made to it, and therefore ſurely muſt confirm and not weaken his teſtimony.

But let us ſuppoſe, that, in another caſe, I examine my firſt

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judgment upon ſome point, and find, that it was attended with unfavourable circumſtances, what, in reaſon, and according to the rules of logic, ought to be the effect of this diſcovery?

The effect ſurely will be, and ought to be, to make me leſs confident in my firſt judgment, until I examine the point anew in more favourable circumſtances. If it be a matter of importance I return to weigh the evidence of my firſt judgment. If it was precipitate before, it muſt now be deliberate in every point. If at firſt I was in paſſion, I muſt now be cool. If I had an intereſt in the deciſion, I muſt place the intereſt on the other ſide.

It is evident, that this review of the ſubject may confirm my firſt judgment, notwithſtanding the ſuſpicious circumſtances that attended it. Though the judge was biaſſed or corrupted, it does not follow, that the ſentence was unjuſt. The rectitude of the deciſion does not depend upon the character of the judge, but upon the nature of the caſe. From that only, it muſt be determined whether the deciſion be juſt. The circumſtances that rendered it ſuſpicious are mere preſumptions, which have no force againſt direct evidence.

Thus, I have conſidered the effect of this eſtimation of our liableneſs to err in our firſt judgment, and have allowed to it all the effect that reaſon and the rules of logic permit. In the caſe I firſt ſuppoſed, and in every caſe where we can diſcover no cauſe of error, it affords a preſumption in favour of the firſt judgment. In other caſes, it may afford a preſumption againſt it. But the rules of logic require, that we ſhould not judge by preſumptions, where we have direct evidence. The effect of an unfavourable preſumption ſhould only be, to make us examine the evidence with the greater care.

The Sceptic urges, in the laſt place, that this eſtimation muſt be ſubjected

ſubjected to another eſtimation, that to another, and ſo on *in infinitum*; and as every new eſtimation takes away from the evidence of the firſt judgment, it muſt at laſt be totally annihilated.

I anſwer, *firſt*, it has been ſhown above, that the firſt eſtimation, ſuppoſing it unfavourable, can only afford a preſumption againſt the firſt judgment; the ſecond, upon the ſame ſuppoſition, will be only the preſumption of a preſumption; and the third, the preſumption that there is a preſumption of a preſumption. This infinite ſeries of preſumptions reſembles an infinite ſeries of quantities decreaſing in geometrical proportion, which amounts only to a finite ſum. The infinite ſeries of ſtages of ACHILLES's journey after the old man, amounts only to two thouſand paces; nor can this infinite ſeries of preſumptions outweigh one ſolid argument in favour of the firſt judgment, ſuppoſing them all to be unfavourable to it.

Secondly, I have ſhown, that the eſtimation of our firſt judgment may ſtrengthen it; and the ſame thing may be ſaid of all the ſubſequent eſtimations. It would, therefore, be as reaſonable to conclude, that the firſt judgment will be brought to infallible certainty when this ſeries of eſtimations is wholly in its favour, as that its evidence will be brought to nothing by ſuch a ſeries ſuppoſed to be wholly unfavourable to it. But, in reality, one ſerious and cool re-examination of the evidence by which our firſt judgment is ſupported, has, and, in reaſon, ought to have more force to ſtrengthen or weaken it, than an infinite ſeries of ſuch eſtimations as our author requires.

Thirdly, I know no reaſon nor rule in logic, that requires that ſuch a ſeries of eſtimations ſhould follow every particular judgment.

A wiſe man who has practiſed reaſoning knows that he is fal-

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lible, and carries this conviction along with him in every judgment he forms. He knows likewiſe that he is more liable to err in ſome caſes than in others. He has a ſcale in his mind, by which he eſtimates his liableneſs to err, and by this he regulates the degree of his aſſent in his firſt judgment upon any point.

The author's reaſoning ſuppoſes, that a man, when he forms his firſt judgment, conceives himſelf to be infallible; that by a ſecond and ſubſequent judgment, he diſcovers that he is not infallible; and that by a third judgment, ſubſequent to the ſecond, he eſtimates his liableneſs to err in ſuch a caſe as the preſent.

If the man proceed in this order, I grant, that his ſecond judgment will, with good reaſon, bring down the firſt from ſuppoſed infallibility to fallibility; and that his third judgment will, in ſome degree, either ſtrengthen or weaken the firſt, as it is corrected by the ſecond.

But every man of underſtanding proceeds in a contrary order. When about to judge in any particular point, he knows already that he is not infallible. He knows what are the caſes in which he is moſt or leaſt liable to err. The conviction of theſe things is always preſent to his mind, and influences the degree of his aſſent in his firſt judgment, as far as to him appears reaſonable.

If he ſhould afterwards find reaſon to ſuſpect his firſt judgment, and deſires to have all the ſatisfaction his faculties can give, reaſon will direct him not to form ſuch a ſeries of eſtimations upon eſtimations, as this author requires, but to examine the evidence of his firſt judgment carefully and coolly; and this review may very reaſonably, according to its reſult, either ſtrengthen or weaken, or totally overturn his firſt judgment.

This

This infinite ſeries of eſtimations, therefore, is not the method that reaſon directs in order to form our judgment in any caſe. It is introduced without neceſſity, without any uſe but to puzzle the underſtanding, and to make us think, that to judge, even in the ſimpleſt and plaineſt caſes, is a matter of inſurmountable difficulty and endleſs labour; juſt as the ancient Sceptic, to make a journey of two thouſand paces appear endleſs, divided it into an infinite number of ſtages.

But we obſerved, that the eſtimation which our author requires may admit of another meaning, which indeed is more agreeable to the expreſſion, but inconſiſtent with what he advanced before.

By the poſſibility of error in the eſtimation of the truth and fidelity of our faculties, may be meant, that we may err by eſteeming our faculties true and faithful, while they may be falſe and fallacious, even when uſed according to the rules of reaſon and logic.

If this be meant, I anſwer, *firſt*, That the truth and fidelity of our faculty of judging is, and muſt be taken for granted in every judgment and in every eſtimation.

If the Sceptic can ſeriouſly doubt of the truth and fidelity of his faculty of judging when properly uſed, and ſuſpend his judgment upon that point till he finds proof, his ſcepticiſm admits of no cure by reaſoning, and he muſt even continue in it until he have new faculties given him, which ſhall have authority to fit in judgment upon the old. Nor is there any need of an endleſs ſucceſſion of doubts upon this ſubject, for the firſt puts an end to all judgment and reaſoning, and to the poſſibility of conviction by that means. The Sceptic has here got poſſeſſion of a ſtrong hold which

is,

CHAP. IV. is impregnable to reaſoning, and we muſt leave him in poſſeſſion of it, till Nature, by other means, makes him give it up.

Secondly, I obſerve, that this ground of ſcepticiſm, from the ſuppoſed infidelity of our faculties, contradicts what the author before advanced in this very argument, to wit, that "the rules of "the demonſtrative ſciences are certain and infallible, and that "truth is the natural effect of reaſon, and that error ariſes from "the irruption of other cauſes."

But perhaps he made theſe conceſſions unwarily. He is therefore at liberty to retract them, and to reſt his ſcepticiſm upon this ſole foundation, That no reaſoning can prove the truth and fidelity of our faculties. Here he ſtands upon firm ground: For it is evident, that every argument offered to prove the truth and fidelity of our faculties, takes for granted the thing in queſtion, and is therefore that kind of ſophiſm which Logicians call *petitio principii*.

All we would aſk of this kind of Sceptic is, that he would be uniform and conſiſtent, and that his practice in life do not belie his profeſſion of ſcepticiſm with regard to the fidelity of his faculties: For the want of faith, as well as faith itſelf, is beſt ſhown by works. If a Sceptic avoid the fire as much as thoſe who believe it dangerous to go into it, we can hardly avoid thinking his ſcepticiſm to be feigned, and not real.

Our author indeed was aware, that neither his ſcepticiſm, nor that of any other perſon, was able to endure this trial, and therefore enters a caveat againſt it. "Neither I, ſays he, nor any other "perſon, was ever ſincerely and conſtantly of that opinion. Na"ture, by an abſolute and uncontrollable neceſſity, has deter"mined us to judge, as well as to breathe and feel. My intention, "therefore, ſays he, in diſplaying ſo carefully the arguments of "that fantaſtic ſect, is only to make the reader ſenſible of the "truth of my hypotheſis, that all our reaſonings concerning "cauſes

" cauſes and effects, are derived from nothing but cuſtom, and that
" belief is more properly an act of the ſenſitive than of the cogita-
" tive part of our nature."

We have before conſidered the firſt part of this hypotheſis, Whether our reaſoning about cauſes be derived only from cuſtom?

The other part of the author's hypotheſis here mentioned is darkly expreſſed, though the expreſſion ſeems to be ſtudied, as it is put in Italics. It cannot ſurely mean that belief is not an act of thinking. It is not, therefore, the power of thinking that he calls the cogitative part of our nature. Neither can it be the power of judging, for all belief implies judgment; and to believe a propoſition means the ſame thing as to judge it to be true. It ſeems, therefore, to be the power of reaſoning that he calls the cogitative part of our nature.

If this be the meaning, I agree to it in part. The belief of firſt principles is not an act of the reaſoning power: For all reaſoning muſt be grounded upon them. We judge them to be true, and believe them without reaſoning. But why this power of judging of firſt principles ſhould be called the ſenſitive part of our nature, I do not underſtand.

As our belief of firſt principles is an act of pure judgment without reaſoning; ſo our belief of the concluſions drawn by reaſoning from firſt principles, may, I think, be called an act of the reaſoning faculty.

Upon the whole, I ſee only two concluſions that can be fairly drawn from this profound and intricate reaſoning againſt reaſon. The firſt is, That we are fallible in all our judgments and in all our reaſonings. The ſecond, That the truth and fidelity of our faculties can never be proved by reaſoning; and therefore our belief

of

CHAP. IV. of it cannot be founded on reaſoning. If the laſt be what the author calls his hypotheſis, I ſubſcribe to it, and think it not an hypotheſis, but a manifeſt truth; though I conceive it to be very improperly expreſſed, by ſaying that belief is more properly an act of the ſenſitive than of the cogitative part of our nature.

ESSAY

ESSAY VIII.

OF TASTE.

CHAP. I.

Of Taſte in general.

THAT power of the mind by which we are capable of diſcerning and reliſhing the beauties of Nature, and whatever is excellent in the fine arts, is called *taſte.*

The external ſenſe of taſte, by which we diſtinguiſh and reliſh the various kinds of food, has given occaſion to a metaphorical application of its name to this internal power of the mind, by which we perceive what is beautiful, and what is deformed or defective in the various objects that we contemplate.

Like the taſte of the palate, it reliſhes ſome things, is diſguſted with others; with regard to many, is indifferent or dubious, and is conſiderably influenced by habit, by aſſociations, and by opinion. Theſe obvious analogies between external and internal taſte, have led men, in all ages, and in all or moſt poliſhed languages, to give the name of the external ſenſe to this power of diſcerning what is beautiful with pleaſure, and what is ugly and faulty in its kind with diſguſt.

In treating of this as an intellectual power of the mind, I in-

CHAP. I. tend only to make ſome obſervations, firſt on its nature, and then on its objects.

1. In the external ſenſe of taſte, we are led by reaſon and reflection to diſtinguiſh between the agreeable ſenſation we feel, and the quality in the object which occaſions it. Both have the ſame name, and on that account are apt to be confounded by the vulgar, and even by Philoſophers. The ſenſation I feel when I taſte any ſapid body is in my mind; but there is a real quality in the body which is the cauſe of this ſenſation. Theſe two things have the ſame name in language, not from any ſimilitude in their nature, but becauſe the one is the ſign of the other, and becauſe there is little occaſion in common life to diſtinguiſh them.

This was fully explained in treating of the ſecondary qualities of bodies. The reaſon of taking notice of it now is, that the internal power of taſte bears a great analogy in this reſpect to the external.

When a beautiful object is before us, we may diſtinguiſh the agreeable emotion it produces in us, from the quality of the object which cauſes that emotion. When I hear an air in muſic that pleaſes me, I ſay, it is fine, it is excellent. This excellence is not in me; it is in the muſic. But the pleaſure it gives is not in the muſic; it is in me. Perhaps I cannot ſay what it is in the tune that pleaſes my ear, as I cannot ſay what it is in a ſapid body that pleaſes my palate; but there is a quality in the ſapid body which pleaſes my palate, and I call it a delicious taſte; and there is a quality in the tune that pleaſes my taſte, and I call it a fine or an excellent air.

This ought the rather to be obſerved, becauſe it is become a faſhion among modern Philoſophers, to reſolve all our perceptions into mere feelings or ſenſations in the perſon that perceives, without any thing correſponding to thoſe feelings in the external object.

ject. According to thoſe Philoſophers, there is no heat in the fire, no taſte in a ſapid body; the taſte and the heat being only in the perſon that feels them. In like manner, there is no beauty in any object whatſoever; it is only a ſenſation or feeling in the perſon that perceives it.

The language and the common ſenſe of mankind contradict this theory. Even thoſe who hold it, find themſelves obliged to uſe a language that contradicts it. I had occaſion to ſhow, that there is no ſolid foundation for it when applied to the ſecondary qualities of body; and the ſame arguments ſhow equally, that it has no ſolid foundation when applied to the beauty of objects, or to any of thoſe qualities that are perceived by a good taſte.

But though ſome of the qualities that pleaſe a good taſte reſemble the ſecondary qualities of body, and therefore may be called occult qualities, as we only feel their effect, and have no more knowledge of the cauſe, but that it is ſomething which is adapted by Nature to produce that effect; this is not always the caſe.

Our judgment of beauty is in many caſes more enlightened. A work of art may appear beautiful to the moſt ignorant, even to a child. It pleaſes, but he knows not why. To one who underſtands it perfectly, and perceives how every part is fitted with exact judgment to its end, the beauty is not myſterious; it is perfectly comprehended; and he knows wherein it conſiſts, as well as how it affects him.

2. We may obſerve, that, though all the taſtes we perceive by the palate are either agreeable or diſagreeable, or indifferent; yet, among thoſe that are agreeable, there is great diverſity, not in degree only, but in kind. And as we have not generical names for all the different kinds of taſte, we diſtinguiſh them by the bodies in which they are found.

CHAP. I.

In like manner, all the objects of our internal taſte are either beautiful, or diſagreeable, or indifferent; yet of beauty there is a great diverſity, not only of degree, but of kind: The beauty of a demonſtration, the beauty of a poem, the beauty of a palace, the beauty of a piece of muſic, the beauty of a fine woman, and many more that might be named, are different kinds of beauty; and we have no names to diſtinguiſh them but the names of the different objects to which they belong.

As there is ſuch diverſity in the kinds of beauty as well as in the degrees, we need not think it ſtrange that Philoſophers have gone into different ſyſtems in analyſing it, and enumerating its ſimple ingredients. They have made many juſt obſervations on the ſubject; but, from the love of ſimplicity, have reduced it to fewer principles than the nature of the thing will permit, having had in their eye ſome particular kinds of beauty, while they overlooked others.

There are moral beauties as well as natural; beauties in the objects of ſenſe, and in intellectual objects; in the works of men, and in the works of God; in things inanimate, in brute animals, and in rational beings; in the conſtitution of the body of man, and in the conſtitution of his mind. There is no real excellence which has not its beauty to a diſcerning eye, when placed in a proper point of view; and it is as difficult to enumerate the ingredients of beauty as the ingredients of real excellence.

3. The taſte of the palate may be accounted moſt juſt and perfect, when we [illegible] that are fit for the nouriſhment of the body, and [illegible] ngs of a contrary nature. The manifeſt in[illegible] ving us this ſenſe, is, that we may diſcern [illegible] at and to drink, and what it is not. Br[illegible] l in the choice of their food merely by [illegible] guide, they chuſe the food that Nature inte[illegible] m make miſtakes, unleſs they be

be pinched by hunger, or deceived by artificial compoſitions. In infants likewiſe the taſte is commonly ſound and uncorrupted, and of the ſimple productions of Nature they reliſh the things that are moſt wholeſome.

In like manner, our internal taſte ought to be accounted moſt juſt and perfect, when we are pleaſed with things that are moſt excellent in their kind, and diſpleaſed with the contrary. The intention of Nature is no leſs evident in this internal taſte than in the external. Every excellence has a real beauty and charm that makes it an agreeable object to thoſe who have the faculty of diſcerning its beauty; and this faculty is what we call a good taſte.

A man, who, by any diſorder in his mental powers, or by bad habits, has contracted a reliſh for what has no real excellence, or what is deformed and defective, has a depraved taſte, like one who finds a more agreeable reliſh in aſhes or cinders than in the moſt wholeſome food. As we muſt acknowledge the taſte of the palate to be depraved in this caſe, there is the ſame reaſon to think the taſte of the mind depraved in the other.

There is therefore a juſt and rational taſte, and there is a depraved and corrupted taſte. For it is too evident, that, by bad education, bad habits, and wrong aſſociations, men may acquire a reliſh for naſtineſs, for rudeneſs, and ill breeding, and for many other deformities. To ſay that ſuch a taſte is not vitiated, is no leſs abſurd than to ſay, that the ſickly girl who delights in eating charcoal and tobacco-pipes, has as juſt and natural a taſte as when ſhe is in perfect health.

4. The force of cuſtom, of fancy, and of caſual aſſociations, is very great both upon the external and internal taſte. An Eſkimaux can regale himſelf with a draught of whale-oil, and a Canadian can feaſt upon a dog. A Kamſchatkadale lives upon putrid fiſh, and is ſometimes reduced to eat the bark of trees. The taſte

CHAP. I. taſte of rum, or of green tea, is at firſt as nauſeous as that of ipecacuan, to ſome perſons, who may be brought by uſe to reliſh what they once found ſo diſagreeable.

When we ſee ſuch varieties in the taſte of the palate produced by cuſtom and aſſociations, and ſome perhaps by conſtitution, we may be the leſs ſurpriſed that the ſame cauſes ſhould produce like varieties in the taſte of beauty; that the African ſhould eſteem thick lips and a flat noſe; that other nations ſhould draw out their ears, till they hang over their ſhoulders; that in one nation ladies ſhould paint their faces, and in another ſhould make them ſhine with greaſe.

5. Thoſe who conceive that there is no ſtandard in nature by which taſte may be regulated, and that the common proverb, That there ought to be no diſpute about taſte, is to be taken in the utmoſt latitude, go upon ſlender and inſufficient ground. The ſame arguments might be uſed with equal force againſt any ſtandard of truth.

Whole nations by the force of prejudice are brought to believe the groſſeſt abſurdities; and why ſhould it be thought that the taſte is leſs capable of being perverted than the judgment? It muſt indeed be acknowledged, that men differ more in the faculty of taſte than in what we commonly call judgment; and therefore it may be expected that they ſhould be more liable to have their taſte corrupted in matters of beauty and deformity, than their judgment in matters of truth and error.

If we make due allowance for this, we ſhall ſee that it is as eaſy to account for the variety of taſtes, though there be in nature a ſtandard of true beauty, and conſequently of [illegible] to account for the variety and contrariety [illegible] there be in nature a ſtandard of truth, and co[illegible] judgment.

6. Nay, if we ſpeak accurately and ſtrictly, we ſhall find, that, in every operation of taſte, there is judgment implied.

When a man pronounces a poem or a palace to be beautiful, he affirms ſomething of that poem or that palace; and every affirmation or denial expreſſes judgment. For we cannot better define judgment, than by ſaying that it is an affirmation or denial of one thing concerning another. I had occaſion to ſhow, when treating of judgment, that it is implied in every perception of our external ſenſes. There is an immediate conviction and belief of the exiſtence of the quality perceived, whether it be colour, or ſound, or figure; and the ſame thing holds in the perception of beauty or deformity.

If it be ſaid that the perception of beauty is merely a feeling in the mind that perceives, without any belief of excellence in the object, the neceſſary conſequence of this opinion is, that when I ſay VIRGIL's Georgics is a beautiful poem, I mean not to ſay any thing of the poem, but only ſomething concerning myſelf and my feelings. Why ſhould I uſe a language that expreſſes the contrary of what I mean?

My language, according to the neceſſary rules of conſtruction, can bear no other meaning but this, that there is ſomething in the poem, and not in me, which I call beauty. Even thoſe who hold beauty to be merely a feeling in the perſon that perceives it, find themſelves under a neceſſity of expreſſing themſelves, as if beauty were ſolely a quality of the object, and not of the percipient.

No reaſon can be given why all mankind ſhould expreſs themſelves thus, but that they believe what they ſay. It is therefore contrary to the univerſal ſenſe of mankind, expreſſed by their language, that beauty is not really in the object, but is merely a feeling in the perſon who is ſaid to perceive it. Philoſophers ſhould be very cautious in oppoſing the common ſenſe of mankind; for, when they do, they rarely miſs going wrong.

Our

CHAP. I.

Our judgment of beauty is not indeed a dry and unaffecting judgment, like that of a mathematical or metaphyſical truth. By the conſtitution of our nature, it is accompanied with an agreeable feeling or emotion, for which we have no other name but the ſenſe of beauty. This ſenſe of beauty, like the perceptions of our other ſenſes, implies not only a feeling, but an opinion of ſome quality in the object which occaſions that feeling.

In objects that pleaſe the taſte, we always judge that there is ſome real excellence, ſome ſuperiority to thoſe that do not pleaſe. In ſome caſes, that ſuperior excellence is diſtinctly perceived, and can be pointed out; in other caſes, we have only a general notion of ſome excellence which we cannot deſcribe. Beauties of the former kind may be compared to the primary qualities perceived by the external ſenſes; thoſe of the latter kind, to the ſecondary.

7. Beauty or deformity in an object, reſults from its nature or ſtructure. To perceive the beauty therefore, we muſt perceive the nature or ſtructure from which it reſults. In this the internal ſenſe differs from the external. Our external ſenſes may diſcover qualities which do not depend upon any antecedent perception. Thus I can hear the ſound of a bell, though I never perceived any thing elſe belonging to it. But it is impoſſible to perceive the beauty of an object without perceiving the object, or at leaſt conceiving it. On this account, Dr HUTCHESON called the ſenſes of beauty and harmony reflex or ſecondary ſenſes; becauſe the beauty cannot be perceived unleſs the object be perceived by ſome other power of the mind. Thus the ſenſe of harmony and melody in ſounds ſuppoſes the external ſenſe of hearing, and is a kind of ſecondary to it. A man born deaf may be a good judge of beauties of another kind, but can have no notion of melody or harmony. The like may be ſaid of beauties in colouring and in figure, which can never be perceived without the ſenſes, by which they are perceived.

CHAP. II.

Of the Objects of Taſte, and firſt of Novelty.

A PHILOSOPHICAL analyſis of the objects of taſte is like applying the anatomical knife to a fine face. The deſign of the Philoſopher, as well as of the Anatomiſt, is not to gratify taſte, but to improve knowledge. The reader ought to be aware of this, that he may not entertain an expectation in which he will be diſappointed.

By the objects of taſte, I mean thoſe qualities or attributes of things, which are by Nature adapted to pleaſe a good taſte. Mr ADDISON, and Dr AKENSIDE after him, have reduced them to three, to wit, novelty, grandeur, and beauty. This diviſion is ſufficient for all I intend to ſay upon the ſubject, and therefore I ſhall adopt it; obſerving only, that beauty is often taken in ſo extenſive a ſenſe as to comprehend all the objects of taſte; yet all the authors I have met with, who have given a diviſion of the objects of taſte, make beauty one ſpecies.

I take the reaſon of this to be, that we have ſpecific names for ſome of the qualities that pleaſe the taſte, but not for all; and therefore all thoſe fall under the general name of beauty, for which there is no ſpecific name in the diviſion.

There are, indeed, ſo many ſpecies of beauty, that it would be as difficult to enumerate them perfectly, as to enumerate all the taſtes we perceive by the palate. Nor does there appear to me ſufficient reaſon for making, as ſome very ingenious authors have done, as many different internal ſenſes as there are different ſpecies of beauty or deformity.

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The diviſion of our external ſenſes is taken from the organs of perception, and not from the qualities perceived. We have not the ſame means of dividing the internal; becauſe, though ſome kinds of beauty belong only to objects of the eye, and others to objects of the ear, there are many which we cannot refer to any bodily organ; and therefore I conceive every diviſion that has been made of our internal ſenſes to be in ſome degree arbitrary. They may be made more or fewer, according as we have diſtinct names for the various kinds of beauty and deformity; and I ſuſpect the moſt copious languages have not names for them all.

Novelty is not properly a quality of the thing to which we attribute it, far leſs is it a ſenſation in the mind to which it is new; it is a relation which the thing has to the knowledge of the perſon. What is new to one man, may not be ſo to another; what is new this moment, may be familiar to the ſame perſon ſome time hence. When an object is firſt brought to our knowledge, it is new, whether it be agreeable or not.

It is evident, therefore, with regard to novelty, (whatever may be ſaid of other objects of taſte) that it is not merely a ſenſation in the mind of him to whom the thing is new; it is a real relation which the thing has to his knowledge at that time.

But we are ſo conſtituted, that what is new to us, commonly gives pleaſure upon that account, if it be not in itſelf diſagreeable. It rouſes our attention, and occaſions an agreeable exertion of our faculties.

The pleaſure we receive from novelty in objects has ſo great influence in human life, that it well deſerves the attention of Philoſophers; and ſeveral ingenious authors, particularly, Dr GERARD in his Eſſay on Taſte, have, I think, ſucceſsfully accounted for it, from the principles of the human conſtitution.

We can perhaps conceive a being ſo made, that his happineſs conſiſts in a continuance of the ſame unvaried ſenſations or feelings, without any active exertion on his part. Whether this be poſſible or not, it is evident that man is not ſuch a being; his good conſiſts in the vigorous exertion of his active and intellective powers upon their proper objects; he is made for action and progreſs, and cannot be happy without it; his enjoyments ſeem to be given by Nature, not ſo much for their own ſake, as to encourage the exerciſe of his various powers. That tranquillity of ſoul in which ſome place human happineſs, is not a dead reſt, but a regular progreſſive motion.

Such is the conſtitution of man by the appointment of Nature. This conſtitution is perhaps a part of the imperfection of our nature; but it is wiſely adapted to our ſtate, which is not intended to be ſtationary, but progreſſive. The eye is not ſatiated with ſeeing, nor the ear with hearing; ſomething is always wanted. Deſire and hope never ceaſe, but remain to ſpur us on to ſomething yet to be acquired; and, if they could ceaſe, human happineſs muſt end with them. That our deſire and hope be properly directed, is our part; that they can never be extinguiſhed, is the work of Nature.

It is this that makes human life ſo buſy a ſcene. Man muſt be doing ſomething, good or bad, trifling or important; and he muſt vary the employment of his faculties, or their exerciſe will become languid, and the pleaſure that attends it ſicken of courſe.

The notions of enjoyment, and of activity, conſidered abſtractly, are no doubt very different, and we cannot perceive a neceſſary connection between them. But, in our conſtitution, they are ſo connected by the wiſdom of Nature, that they muſt go hand in hand; and the firſt muſt be led and ſupported by the laſt.

An object at firſt, perhaps, gave much pleaſure, while attention

CHAP. II. was directed to it with vigour. But attention cannot be long confined to one unvaried object, nor can it be carried round in the ſame narrow circle. Curioſity is a capital principle in the human conſtitution, and its food muſt be what is in ſome reſpect new. What is ſaid of the Athenians may in ſome degree be applied to all mankind, That their time is ſpent in hearing, or telling, or doing ſome new thing.

Into this part of the human conſtitution, I think, we may reſolve the pleaſure we have from novelty in objects.

Curioſity is commonly ſtrongeſt in children and in young perſons, and accordingly novelty pleaſes them moſt. In all ages, in proportion as novelty gratifies curioſity, and occaſions a vigorous exertion of any of our mental powers in attending to the new object, in the ſame proportion it gives pleaſure. In advanced life, the indolent and inactive have the ſtrongeſt paſſion for news, as a relief from a painful vacuity of thought.

But the pleaſure derived from new objects, in many caſes, is not owing ſolely or chiefly to their being new, but to ſome other circumſtance that gives them value. The new faſhion in dreſs, furniture, equipage, and other accommodations of life, gives pleaſure, not ſo much, as I apprehend, becauſe it is new, as becauſe it is a ſign of rank, and diſtinguiſhes a man from the vulgar.

In ſome things novelty is due, and the want of it a real imperfection. Thus, if an author adds to the number of books, with which the public is already overloaded, we expect from him ſomething new; and if he ſays nothing but what has been ſaid before in as agreeable a manner, we are juſtly diſguſted.

When novelty is altogether ſeparated from the conception of worth and utility, it makes but a ſlight [redacted] correct taſte. Every diſcovery in natur[redacted]

ſciences, has a real value, and gives a rational pleaſure to a good taſte. But things that have nothing to recommend them but novelty, are fit only to entertain children, or thoſe who are diſtreſſed from a vacuity of thought. This quality of objects may therefore be compared to the cypher in arithmetic, which adds greatly to the value of ſignificant figures; but, when put by itſelf, ſignifies nothing at all.

CHAP. III.

Of Grandeur.

THE qualities which pleaſe the taſte are not more various in themſelves than are the emotions and feelings with which they affect our minds.

Things new and uncommon affect us with a pleaſing ſurpriſe, which rouſes and invigorates our attention to the object. But this emotion ſoon flags, if there is nothing but novelty to give it continuance, and leaves no effect upon the mind.

The emotion raiſed by grand objects is awful, ſolemn, and ſerious.

Of all objects of contemplation, the Supreme Being is the moſt grand. His eternity, his immenſity, his irreſiſtible power, his infinite knowledge and unerring wiſdom, his inflexible juſtice and rectitude, his ſupreme government, conducting all the movements of this vaſt univerſe to the nobleſt ends, and in the wiſeſt manner, are objects which fill the utmoſt capacity of the ſoul, and reach far beyond its comprehenſion.

The emotion which this grandeſt of all objects raiſes in the human mind, is what we call devotion; a ſerious recollected temper which

CHAP. III. which inſpires magnanimity, and diſpoſes to the moſt heroic acts of virtue.

The emotion produced by other objects which may be called grand, though in an inferior degree, is, in its nature and in its effects, ſimilar to that of devotion. It diſpoſes to ſerioufneſs, elevates the mind above its uſual ſtate, to a kind of enthuſiaſm, and inſpires magnaminity, and a contempt of what is mean.

Such, I conceive, is the emotion which the contemplation of grand objects raiſes in us. We are next to conſider what this grandeur in objects is.

To me it ſeems to be nothing elſe but ſuch a degree of excellence, in one kind or another, as merits our admiration.

There are ſome attributes of mind which have a real and intrinſic excellence, compared with their contraries, and which, in every degree, are the natural objects of eſteem, but, in an uncommon degree are objects of admiration. We put a value upon them becauſe they are intrinſically valuable and excellent.

The ſpirit of modern philoſophy would indeed lead us to think, that the worth and value we put upon things is only a ſenſation in our minds, and not any thing inherent in the object; and that we might have been ſo conſtituted as to put the higheſt value upon the things which we now deſpiſe, and to deſpiſe the qualities which we now highly eſteem.

It gives me pleaſure to obſerve, that Dr PRICE, in his Review of the Queſtions concerning morals, ſtrenuouſly oppoſes this opinion, as well as that which reſolves moral right and wrong into a ſenſation in the mind of the ſpectator. That judicious author ſaw the conſequences which theſe opinions draw after them, and has traced them to their ſource, to wit, the acc[redacted]

and adopted by the generality of modern Philoſophers, of the origin of all our ideas, which account he ſhows to be very defective. CHAP. III.

This proneneſs to reſolve every thing into feelings and ſenſations, is an extreme into which we have been led by the deſire of avoiding an oppoſite extreme, as common in the ancient philoſophy.

At firſt, men are prone by nature and by habit to give all their attention to things external. Their notions of the mind, and its operations, are formed from ſome analogy they bear to objects of ſenſe; and an external exiſtence is aſcribed to things which are only conceptions or feelings of the mind.

This ſpirit prevailed much in the philoſophy both of PLATO and of ARISTOTLE, and produced the myſterious notions of eternal and ſelf-exiſtent ideas, of *materia prima*, of ſubſtantial forms, and others of the like nature.

From the time of DES CARTES, philoſophy took a contrary turn. That great man diſcovered, that many things ſuppoſed to have an external exiſtence, were only conceptions or feelings of the mind. This track has been purſued by his ſucceſſors to ſuch an extreme, as to reſolve every thing into ſenſations, feelings, and ideas in the mind, and to leave nothing external at all.

The Peripatetics thought, that heat and cold which we feel to be qualities of external objects. The moderns make heat and cold to be ſenſations only, and allow no real quality of body to be called by that name: And the ſame judgment they have formed with regard to all ſecondary qualities.

So far DES CARTES and Mr LOCKE went. Their ſucceſſors being put into this track of converting into feelings things that were believed to have an external exiſtence, found that extenſion, ſolidity, figure, and all the primary qualities of body, are ſenſations or feelings

CHAP. III. feelings of the mind; and that the material world is a phænomenon only, and has no exiſtence but in our mind.

It was then a very natural progreſs to conceive, that beauty, harmony, and grandeur, the objects of taſte, as well as right and wrong, the objects of the moral faculty, are nothing but feelings of the mind.

Thoſe who are acquainted with the writings of modern Philoſophers, can eaſily trace this doctrine of feelings, from DES CARTES down to Mr HUME, who put the finiſhing ſtroke to it, by making truth and error to be feelings of the mind, and belief to be an operation of the ſenſitive part of our nature.

To return to our ſubject, if we hearken to the dictates of common ſenſe, we muſt be convinced that there is real excellence in ſome things, whatever our feelings or our conſtitution be.

It depends no doubt upon our conſtitution, whether we do, or do not perceive excellence where it really is: But the object has its excellence from its own conſtitution, and not from ours.

The common judgment of mankind in this matter ſufficiently appears in the language of all nations, which uniformly aſcribes excellence, grandeur, and beauty to the object, and not to the mind that perceives it. And I believe in this, as in moſt other things, we ſhall find the common judgment of mankind and true philoſophy not to be at variance.

Is not power in its nature more excellent than weakneſs; knowledge than ignorance; wiſdom than folly; fortitude than puſillanimity?

Is there no intrinſic excellence in ſelf-command, in generoſity, in public ſpirit? Is not friendſhip a better affection of mind than hatred, a noble emulation, than envy?

Let

Let us [illegible] being ſo conſtituted, as to have a high reſpect [illegible]ſs, and folly; to venerate cowardice, malice, [illegible] and to hold the contrary qualities in contempt; to have [illegible] for lying and falſehood, and to love moſt thoſe who imposed upon him, and uſed him worſt. Could we believe ſuch a conſtitution to be any thing elſe than madneſs and delirium? It is impoſſible. We can as eaſily conceive a conſtitution, by which one ſhould perceive two and three to make fifteen, or a part to be greater than the whole.

Every one who attends to the operations of his own mind will find it to be certainly true, as it is the common belief of mankind, that eſteem is led by opinion, and that every perſon draws our eſteem, as far only as he appears either to reaſon or fancy to be amiable and worthy.

There is therefore a real intrinſic excellence in ſome qualities of mind, as in power, knowledge, wiſdom, virtue, magnanimity. Theſe in every degree merit eſteem; but in an uncommon degree they merit admiration; and that which merits admiration we call grand.

In the contemplation of uncommon excellence, the mind feels a noble enthuſiaſm, which diſpoſes it to the imitation of what it admires.

When we contemplate the character of CATO, his greatneſs of ſoul, his ſuperiority to pleaſure, to toil, and to danger, his ardent zeal for the liberty of his country; when we ſee him ſtanding unmoved in misfortunes, the laſt pillar of the liberty of Rome, and falling nobly in his country's ruin, who would not wiſh to be CATO rather than CÆSAR in all his triumph?

Such a ſpectacle of a great ſoul ſtruggling with misfortune, SENECA thought not unworthy of the attention of JUPITER himſelf,

 "Ecce

CHAP. III. " Ecce ſpectaculum Deo dignum, ad quod reſpiciat JUPITER ſuo
" operi intentus, vir fortis cum mala fortuna compoſitus."

As the Deity is of all objects of thought the moſt grand, the deſcriptions given in holy writ of his attributes and works, even when clothed in ſimple expreſſion, are acknowledged to be ſublime. The expreſſion of Moſes, " And God ſaid, Let there be " light, and there was light," has not eſcaped the notice of LONGINUS, a Heathen Critic, as an example of the ſublime.

What we call ſublime in deſcription, or in ſpeech of any kind, is a proper expreſſion of the admiration and enthuſiaſm which the ſubject produces in the mind of the ſpeaker. If this admiration and enthuſiaſm appears to be juſt, it carries the hearer along with it involuntarily, and by a kind of violence rather than by cool conviction: For no paſſions are ſo infectious as thoſe which hold of enthuſiaſm.

But, on the other hand, if the paſſion of the ſpeaker appears to be in no degree juſtified by the ſubject or the occaſion, it produces in the judicious hearer no other emotion but ridicule and contempt.

The true ſublime cannot be produced ſolely by art in the compoſition; it muſt take its riſe from grandeur in the ſubject, and a correſponding emotion raiſed in the mind of the ſpeaker. A proper exhibition of theſe, though it ſhould be artleſs, is irreſiſtible, like fire thrown into the midſt of combuſtible matter.

When we contemplate the earth, the ſea, the planetary ſyſtem, the univerſe, theſe are vaſt objects; it requires a ſtretch of imagination to graſp them in our minds. But they appear truly grand, and merit the higheſt admiration, when we conſider them as the work of God, who, in the ſimple ſtyle of ſcripture, ſtretched out the

heavens, and laid the foundation of the earth; or, in the poetical language of MILTON, CHAP. III.

In his hand
He took the golden compaſſes, prepar'd,
In God's eternal ſtore, to circumſcribe
This univerſe, and all created things.
One foot he center'd, and the other turn'd
Round thro' the vaſt profundity obſcure;
And ſaid, thus far extend, thus far thy bounds;
This be thy juſt circumference, O world.

When we contemplate the world of EPICURUS, and conceive the univerſe to be a fortuitous jumble of atoms, there is nothing grand in this idea. The claſhing of atoms by blind chance has nothing in it fit to raiſe our conceptions, or to elevate the mind. But the regular ſtructure of a vaſt ſyſtem of beings, produced by creating power, and governed by the beſt laws which perfect wiſdom and goodneſs could contrive, is a ſpectacle which elevates the underſtanding, and fills the ſoul with devout admiration.

A great work is a work of great power, great wiſdom, and great goodneſs, well contrived for ſome important end. But power, wiſdom, and goodneſs, are properly the attributes of mind only: They are aſcribed to the work figuratively, but are really inherent in the author: And, by the ſame figure, the grandeur is aſcribed to the work, but is properly inherent in the mind that made it.

Some figures of ſpeech are ſo natural and ſo common in all languages, that we are led to think them literal and proper expreſſions. Thus an action is called brave, virtuous, generous; but it is evident, that valour, virtue, generoſity, are the attributes of perſons only, and not of actions. In the action conſidered abſtractly, there is neither valour, nor virtue, nor generoſity. The ſame action done from a different motive may deſerve none of thoſe epithets.

CHAP. III. The change in this caſe is not in the action, but in the agent; yet, in all languages, generoſity and other moral qualities are aſcribed to actions. By a figure, we aſſign to the effect a quality which is inherent only in the cauſe.

By the ſame figure, we aſcribe to a work that grandeur which properly is inherent in the mind of the author.

When we conſider the Iliad as the work of the poet, its ſublimity was really in the mind of HOMER. He conceived great characters, great actions, and great events, in a manner ſuitable to their nature, and with thoſe emotions which they are naturally fitted to produce; and he conveys his conceptions and his emotions by the moſt proper ſigns. The grandeur of his thoughts is reflected to our eye by his work, and therefore it is juſtly called a grand work.

When we conſider the things preſented to our mind in the Iliad, without regard to the poet, the grandeur is properly in HECTOR and ACHILLES, and the other great perſonages, human and divine, brought upon the ſtage.

Next to the Deity and his works, we admire great talents and heroic virtue in men, whether repreſented in hiſtory or in fiction. The virtues of CATO, ARISTIDES, SOCRATES, MARCUS AURELIUS, are truly grand. Extraordinary talents and genius, whether in Poets, Orators, Philoſophers, or Lawgivers, are objects of admiration, and therefore grand. We find writers of taſte ſeized with a kind of enthuſiaſm in the deſcription of ſuch perſonages.

What a grand idea does VIRGIL give of the power of eloquence, when he compares the tempeſt of the ſea, ſuddenly calmed by the command of Neptune, to a furious ſedition in a great city, quelled at once by a man of authority and eloquence.

Sic

Sic ait, ac dicto citius tumida æquora placat:
Ac veluti magno in populo, ſi forte coorta eſt
Seditio, ſævitque animis ignobile vulgus;
Jamque faces et ſaxa volant, furor arma miniſtrat;
Tum pietate gravem, et meritis, ſi forte virum quem
Conſpexere, ſilent, arrectiſque auribus adſtant.
Ille regit dictis animos, et pectora mulcet.
Sic cunctus pelagi cecidit fragor.

The wonderful genius of Sir ISAAC NEWTON, and his ſagacity in diſcovering the laws of Nature, is admirably expreſſed in that ſhort but ſublime epitaph by POPE:

Nature and Nature's laws lay hid in night;
God ſaid, Let NEWTON be, and all was light.

Hitherto we have found grandeur only in qualities of mind; but it may be aſked, Is there no real grandeur in material objects?

It will perhaps appear extravagant to deny that there is; yet it deſerves to be conſidered, whether all the grandeur we aſcribe to objects of ſenſe be not derived from ſomething intellectual, of which they are the effects or ſigns, or to which they bear ſome relation or analogy.

Beſides the relations of effect and cauſe, of ſign and thing ſignified, there are innumerable ſimilitudes and analogies between things of very different nature, which lead us to connect them in our imagination, and to aſcribe to the one what properly belongs to the other.

Every metaphor in language is an inſtance of this; and it muſt be remembered, that a very great part of language, which we now account proper, was originally metaphorical; for the metaphorical meaning becomes the proper as ſoon as it becomes the

CHAP. III.

moſt uſual; much more, when that which was at firſt the proper meaning falls into diſuſe.

The poverty of language, no doubt, contributes in part to the uſe of metaphor; and therefore we find the moſt barren and uncultivated languages the moſt metaphorical. But the moſt copious language may be called barren, compared with the fertility of human conceptions, and can never, without the uſe of figures, keep pace with the variety of their delicate modifications.

But another cauſe of the uſe of metaphor is, that we find pleaſure in diſcovering relations, ſimilitudes, analogies, and even contraſts that are not obvious to every eye. All figurative ſpeech preſents ſomething of this kind; and the beauty of poetical language ſeems to be derived in a great meaſure from this ſource.

Of all figurative language, that is the moſt common, the moſt natural, and the moſt agreeable, which either gives a body, if we may ſo ſpeak, to things intellectual, and clothes them with viſible qualities; or which, on the other hand, gives intellectual qualities to the objects of ſenſe.

To beings of more exalted faculties, intellectual objects may perhaps appear to moſt advantage in their naked ſimplicity. But we can hardly conceive them but by means of ſome analogy they bear to the objects of ſenſe. The names we give them are almoſt all metaphorical or analogical.

Thus the names of grand and ſublime, as well as their oppoſites, mean and low, are evidently borrowed from the dimenſions of body; yet it muſt be acknowledged, that many things are truly grand and ſublime, to which we cannot aſcribe the dimenſions of height and extenſion.

Some analogy there is, without doubt, between greatneſs of dimenſion,

menſion, which is an object of external ſenſe, and that grandeur, which is an object of taſte. On account of this analogy, the laſt borrows its name from the firſt; and the name being common, leads us to conceive that there is ſomething common in the nature of the things. CHAP. III.

But we ſhall find many qualities of mind, denoted by names taken from ſome quality of body to which they have ſome analogy, without any thing common in their of nature.

Sweetneſs and auſterity, ſimplicity and duplicity, rectitude and crookedneſs, are names common to certain qualities of mind, and to qualities of body to which they have ſome analogy; yet he would err greatly who aſcribed to a body that ſweetneſs or that ſimplicity which are the qualities of mind. In like manner, greatneſs and meanneſs are names common to qualities perceived by the external ſenſe, and to qualities perceived by taſte; yet he may be in an error, who aſcribes to the objects of ſenſe that greatneſs or that meanneſs, which is only an object of taſte.

As intellectual objects are made more level to our apprehenſion by giving them a viſible form; ſo the objects of ſenſe are dignified and made more auguſt, by aſcribing to them intellectual qualities which have ſome analogy to thoſe they really poſſeſs. The ſea rages, the ſky lowrs, the meadows ſmile, the rivulets murmur, the breezes whiſper, the ſoil is grateful or ungrateful; ſuch expreſſions are ſo familiar in common language, that they are ſcarcely accounted poetical or figurative; but they give a kind of dignity to inanimate objects, and make our conception of them more agreeable.

When we conſider matter as an inert, extended, diviſible and moveable ſubſtance, there ſeems to be nothing in theſe qualities which we can call grand; and when we aſcribe grandeur to any portion of matter, however modified, may it not borrow this quality from ſomething intellectual, of which it is the effect, or ſign, or inſtrument,

CHAP. III.

inſtrument, or to which it bears ſome analogy; or, perhaps, becauſe it produces in the mind an emotion that has ſome reſemblance to that admiration which truly grand objects raiſe?

A very elegant writer on the ſublime and beautiful, makes every thing grand or ſublime that is terrible. Might he not be led to this by the ſimilarity between dread and admiration? Both are grave and ſolemn paſſions; both make a ſtrong impreſſion upon the mind; and both are very infectious. But they differ ſpecifically, in this reſpect, that admiration ſuppoſes ſome uncommon excellence in its object, which dread does not. We may admire what we ſee no reaſon to dread; and we may dread what we do not admire. In dread, there is nothing of that enthuſiaſm which naturally accompanies admiration, and is a chief ingredient of the emotion raiſed by what is truly grand or ſublime.

Upon the whole, I humbly apprehend, that true grandeur is ſuch a degree of excellence as is fit to raiſe an enthuſiaſtical admiration; that this grandeur is found originally and properly in qualities of mind; that it is diſcerned in objects of ſenſe only by reflection, as the light we perceive in the moon and planets is truly the light of the ſun; and that thoſe who look for grandeur in mere matter, ſeek the living among the dead.

If this be a miſtake, it ought at leaſt to be granted, that the grandeur which we perceive in qualities of mind, ought to have a different name from that which belongs properly to the objects of ſenſe, as they are very different in their nature, and produce very different emotions in the mind of the ſpectator.

CHAP.

CHAP. IV.

Of Beauty.

BEAUTY is found in things ſo various, and ſo very different in nature, that it is difficult to ſay wherein it conſiſts, or what there can be common to all the objects in which it is found.

Of the objects of ſenſe, we find beauty in colour, in ſound, in form, in motion. There are beauties of ſpeech, and beauties of thought; beauties in the arts, and in the ſciences; beauties in actions, in affections, and in characters.

In things ſo different, and ſo unlike, is there any quality, the ſame in all, which we may call by the name of beauty? What can it be that is common to the thought of a mind, and the form of a piece of matter, to an abſtract theorem, and a ſtroke of wit?

I am indeed unable to conceive any quality in all the different things that are called beautiful, that is the ſame in them all. There ſeems to be no identity, nor even ſimilarity, between the beauty of a theorem and the beauty of a piece of muſic, though both may be beautiful. The kinds of beauty ſeem to be as various as the objects to which it is aſcribed.

But why ſhould things ſo different be called by the ſame name? This cannot be without a reaſon. If there be nothing common in the things themſelves, they muſt have ſome common relation to us, or to ſomething elſe, which leads us to give them the ſame name.

All the objects we call beautiful agree in two things, which

CHAP. IV. ſeem to concur in our ſenſe of beauty. *Firſt*, When they are perceived, or even imagined, they produce a certain agreeable emotion or feeling in the mind; and *ſecondly*, This agreeable emotion is accompanied with an opinion or belief of their having ſome perfection or excellence belonging to them.

Whether the pleaſure we feel in contemplating beautiful objects may have any neceſſary connection with the belief of their excellence, or whether that pleaſure be conjoined with this belief, by the good pleaſure only of our Maker, I will not determine. The reader may ſee Dr PRICE's ſentiments upon this ſubject, which merit conſideration, in the ſecond chapter of his Review of the Queſtions concerning Morals.

Though we may be able to conceive theſe two ingredients of our ſenſe of beauty disjoined, this affords no evidence that they have no neceſſary connection. It has indeed been maintained, that whatever we can conceive, is poſſible: But I endeavoured, in treating of conception, to ſhow, that this opinion, though very common, is a miſtake. There may be, and probably are, many neceſſary connections of things in nature, which we are too dim-ſighted to diſcover.

The emotion produced by beautiful objects is gay and pleaſant. It ſweetens and humaniſes the temper, is friendly to every benevolent affection, and tends to allay ſullen and angry paſſions. It enlivens the mind, and diſpoſes it to other agreeable emotions, ſuch as thoſe of love, hope, and joy. It gives a value to the object, abſtracted from its utility.

In things that may be poſſeſſed as property, beauty greatly enhances the price. A beautiful dog or horſe, a beautiful coach or houſe, a beautiful picture or proſpect, is valued by its owner and by others, not only for its utility, but for its beauty.

If the beautiful object be a perſon, his company and converſation are, on that account, the more agreeable, and we are diſpoſed to love and eſteem him. Even in a perfect ſtranger, it is a powerful recommendation, and diſpoſes us to favour and think well of him, if of our own ſex, and ſtill more if of the other.

"There is nothing, ſays Mr ADDISON, that makes its way more "directly to the ſoul than beauty, which immediately diffuſes "a ſecret ſatisfaction and complacence through the imagina- "tion, and gives a finiſhing to any thing that is great and uncom- "mon. The very firſt diſcovery of it ſtrikes the mind with an "inward joy, and ſpreads a cheerfulneſs and delight through all "its faculties."

As we aſcribe beauty, not only to perſons, but to inanimate things, we give the name of love or liking to the emotion, which beauty, in both theſe kinds of objects, produces. It is evident, however, that liking to a perſon is a very different affection of mind from liking to an inanimate thing. The firſt always implies benevolence; but what is inanimate cannot be the object of benevolence. The two affections, however different, have a reſemblance in ſome reſpects; and, on account of that reſemblance, have the ſame name: And perhaps beauty, in theſe two different kinds of objects, though it has one name, may be as different in its nature as the emotions which it produces in us.

Beſides the agreeable emotion which beautiful objects produce in the mind of the ſpectator, they produce alſo an opinion or judgment of ſome perfection or excellence in the object. This I take to be a ſecond ingredient in our ſenſe of beauty, though it ſeems not to be admitted by modern Philoſophers.

The ingenious Dr HUTCHESON, who perceived ſome of the defects of Mr LOCKE's ſyſtem, and made very important improvements upon it, ſeems to have been carried away by it, in his no-

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tion of beauty. In his Inquiry concerning Beauty, Sect. 1. "Let "it be obſerved, ſays he, that, in the following papers, the word "beauty is taken for the idea raiſed in us, and the ſenſe of beauty "for our power of receiving that idea." And again; "Only "let it be obſerved, that, by abſolute or original beauty, is not "underſtood any quality ſuppoſed to be in the object which "ſhould, of itſelf, be beautiful, without relation to any mind "which perceives it: For beauty, like other names of ſenſible "ideas, properly denotes the perception of ſome mind; ſo cold, "hot, ſweet, bitter, denote the ſenſations in our minds, to which "perhaps there is no reſemblance in the objects which excite theſe "ideas in us; however, we generally imagine otherwiſe. Were "there no mind, with a ſenſe of beauty, to contemplate objects, "I ſee not how they could be called beautiful."

There is no doubt an analogy between the external ſenſes of touch and taſte, and the internal ſenſe of beauty. This analogy led Dr HUTCHESON, and other modern Philoſophers, to apply to beauty, what DES CARTES and LOCKE had taught concerning the ſecondary qualities, perceived by the external ſenſes.

Mr LOCKE's doctrine concerning the ſecondary qualities of body, is not ſo much an error in judgment as an abuſe of words. He diſtinguiſhed very properly between the ſenſations we have of heat and cold, and that quality or ſtructure in the body which is adapted by Nature to produce thoſe ſenſations in us. He obſerved very juſtly, that there can be no ſimilitude between one of theſe and the other. They have the relation of an effect to its cauſe, but no ſimilitude. This was a very juſt and proper correction of the doctrine of the Peripatetics, who taught, that all our ſenſations are the very form and image of the quality in the object by which they are produced.

What remained to be determined was, whether the words, heat and cold, in common language, ſignify the ſenſations

the qualities of the object which are the cauſe of theſe ſenſations. Mr LOCKE made heat and cold to ſignify only the ſenſations we feel, and not the qualities which are the cauſe of them. And in this, I apprehend, lay his miſtake. For it is evident, from the uſe of language, that hot and cold, ſweet and bitter, are attributes of external objects, and not of the perſon who perceives them. Hence, it appears a monſtrous paradox to ſay, there is no heat in the fire, no ſweetneſs in ſugar: But, when explained according to Mr LOCKE's meaning, it is only, like moſt other paradoxes, an abuſe of words.

The ſenſe of beauty may be analyſed in a manner very ſimilar, to the ſenſe of ſweetneſs. It is an agreeable feeling or emotion, accompanied with an opinion or judgment of ſome excellence in the object, which is fitted by Nature to produce that feeling.

The feeling is, no doubt, in the mind, and ſo alſo is the judgment we form of the object: But this judgment, like all others, muſt be true or falſe. If it be a true judgment, there is ſome real excellence in the object. And the uſe of all languages ſhows, that the name of beauty belongs to this excellence of the object, and not to the feelings of the ſpectator.

To ſay that there is in reality no beauty in thoſe objects in which all men perceive beauty, is to attribute to man fallacious ſenſes. But we have no ground to think ſo diſreſpectfully of the Author of our being; the faculties he hath given us are not fallacious; nor is that beauty, which he hath ſo liberally diffuſed over all the works of his hands, a mere fancy in us, but a real excellence in his works, which expreſs the perfection of their Divine Author.

We have reaſon to believe, not only that the beauties we ſee in nature are real, and not fanciful, but that there are thouſands which our faculties are too dull to perceive. We ſee many beauties,

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ties, both of human and divine art, which the brute animals are incapable of perceiving; and ſuperior beings may excel us as far in their diſcernment of true beauty as we excel the brutes.

The man who is ſkilled in painting or ſtatuary, ſees more of the beauty of a fine picture or ſtatue than a common ſpectator. The ſame thing holds in all the fine arts. The moſt perfect works of art have a beauty that ſtrikes even the rude and ignorant; but they ſee only a ſmall part of that beauty which is ſeen in ſuch works by thoſe who underſtand them perfectly, and can produce them.

This may be applied with no leſs juſtice to the works of Nature. They have a beauty that ſtrikes even the ignorant and inattentive. But the more we diſcover of their ſtructure, of their mutual relations, and of the laws by which they are governed, the greater beauty, and the more delightful marks of art, wiſdom and goodneſs, we diſcern.

Thus the expert Anatomiſt ſees numberleſs beautiful contrivances in the ſtructure of the human body, which are unknown to the ignorant.

Although the vulgar eye ſees much beauty in the face of the heavens, and in the various motions and changes of the heavenly bodies, the expert Aſtronomer, who knows their order and diſtances, their periods, the orbits they deſcribe in the vaſt regions of ſpace, and the ſimple and beautiful laws by which their motions are governed, and all the appearances of their ſtations, progreſſions, and retrogradations, their eclipſes, occultations, and tranſits are produced, ſees a beauty, order, and harmony reign through the whole planetary ſyſtem, which delights the mind. The eclipſes of the ſun and moon, and the blazing tails of comets, which ſtrike terror into barbarous nations, furniſh the moſt pleaſing entertainment to his eye, and a feaſt to his underſtanding.

In

In every part of Nature's works, there are numberleſs beauties, which, on account of our ignorance, we are unable to perceive. Superior beings may ſee more than we; but he only who made them, and, upon a review, pronounced them all to be very good, can ſee all their beauty.

Our determinations with regard to the beauty of objects, may, I think, be diſtinguiſhed into two kinds; the firſt we may call inſtinctive, the other rational.

Some objects ſtrike us at once, and appear beautiful at firſt ſight, without any reflection, without our being able to ſay why we call them beautiful, or being able to ſpecify any perfection which juſtifies our judgment. Something of this kind there ſeems to be in brute animals, and in children before the uſe of reaſon; nor does it end with infancy, but continues through life.

In the plumage of birds, and of butterflies, in the colours and form of flowers, of ſhells, and of many other objects, we perceive a beauty that delights; but cannot ſay what it is in the object that ſhould produce that emotion.

The beauty of the object may in ſuch caſes be called an occult quality. We know well how it affects our ſenſes; but what it is in itſelf we know not. But this, as well as other occult qualities, is a proper ſubject of philoſophical diſquiſition; and, by a careful examination of the objects to which Nature hath given this amiable quality, we may perhaps diſcover ſome real excellence in the object, or, at leaſt, ſome valuable purpoſe that is ſerved by the effect which it produces upon us.

This inſtinctive ſenſe of beauty, in different ſpecies of animals, may differ as much as the external ſenſe of taſte, and in each ſpecies be adapted to its manner of life. By this perhaps the various tribes are led to aſſociate with their kind, to dwell among certain objects

CHAP. IV. objects rather than others, and to construct their habitation in a particular manner.

There seem likewise to be varieties in the sense of beauty in the individuals of the same species, by which they are directed in the choice of a mate, and in the love and care of their offspring.

"We see," says Mr ADDISON, "that every different species of "sensible creatures has its different notions of beauty, and that "each of them is most affected with the beauties of its own kind. "This is no where more remarkable than in birds of the same "shape and proportion, where we often see the mate determined in "his courtship by the single grain or tincture of a feather, and "never discovering any charms but in the colour of its own "species."

"Scit thalamo servare fidem, sanctasque veretur
"Connubii leges; non illum in pectore candor
"Sollicitat niveus; neque pravum accendit amorem
"Splendida lanugo, vel honesta in vertice crista;
"Purpureusve nitor pennarum; ast agmina latè
"Fœminea explorat cautus, maculasque requirit
"Cognatas, paribusque interlita corpora guttis:
"Ni faceret, pictis sylvam circum undique monstris
"Confusam aspiceres vulgo, partusque biformes,
"Et genus ambiguum, et veneris monumenta nefandæ.

"Hinc merula in nigro se oblectat nigra marito;
"Hinc socium lasciva petit philomela canorum,
"Agnoscitque pares sonitus; hinc noctua tetram
"Canitiem alarum, et glaucos miratur ocellos.
"Nempe sibi semper constat, crescitque quotannis
"Lucida progenies, castos confessa parentes;
"Vere novo [illegible]

In the human kind there are varieties in the taſte of beauty, of which we can no more aſſign a reaſon than of the variety of their features, though it is eaſy to perceive that very important ends are anſwered by both. Theſe varieties are moſt obſervable in the judgments we form of the features of the other ſex; and in this the intention of Nature is moſt apparent.

As far as our determinations of the comparative beauty of objects are inſtinctive, they are no ſubject of reaſoning or of criticiſm; they are purely the gift of Nature, and we have no ſtandard by which they may be meaſured.

But there are judgments of beauty that may be called rational, being grounded on ſome agreeable quality of the object which is diſtinctly conceived, and may be ſpecified.

This diſtinction between a rational judgment of beauty and that which is inſtinctive, may be illuſtrated by an inſtance.

In a heap of pebbles, one that is remarkable for brilliancy of colour and regularity of figure, will be picked out of the heap by a child. He perceives a beauty in it, puts a value upon it, and is fond of the property of it. For this preference, no reaſon can be given, but that children are, by their conſtitution, fond of brilliant colours, and of regular figures.

Suppoſe again that an expert mechanic views a well conſtructed machine. He ſees all its parts to be made of the fitteſt materials, and of the moſt proper form; nothing ſuperfluous, nothing deficient; every part adapted to its uſe, and the whole fitted in the moſt perfect manner to the end for which it is intended. He pronounces it to be a beautiful machine. He views it with the ſame agreeable emotion as the child viewed the pebble; but he can give a reaſon for his judgment, and point out the particular perfections of the object on which it is grounded.

inſtinctive and the rational ſenſe of beauty may guiſhed in ſpeculation, yet, in paſſing judgment objects, they are often ſo mixed and confounded, to aſſign to each its own province. Nay, it may t a judgment of the beauty of an object, which was at firſt merely inſtinctive, ſhall afterwards become rational, when we diſcover ſome latent perfection of which that beauty in the object is a ſign.

As the ſenſe of beauty may be diſtinguiſhed into inſtinctive and rational; ſo I think beauty itſelf may be diſtinguiſhed into original and derived.

As ſome objects ſhine by their own light, and many more by light that is borrowed and reflected; ſo I conceive the luſtre of beauty in ſome objects is inherent and original, and in many others is borrowed and reflected.

There is nothing more common in the ſentiments of all mankind, and in the language of all nations, than what may be called a communication of attributes; that is, transferring an attribute, from the ſubject to which it properly belongs, to ſome related or reſembling ſubject.

The various objects which Nature preſents to our view, even thoſe that are moſt different in kind, have innumerable ſimilitudes, relations, and analogies, which we contemplate with pleaſure, and which lead us naturally to borrow words and attributes from one object to expreſs what belongs to another. The greateſt part of every language under heaven is made up of words borrowed from one thing, and applied to ſomething ſuppoſed to have ſome relation or analogy to their firſt ſignification.

and even intellectual and moral qualities. And although the qualities that are thus made common belong to one of the ſubjects in the proper ſenſe, and to the other metaphorically, theſe different ſenſes are often ſo mixed in our imagination, as to produce the ſame ſentiment with regard to both.

It is therefore natural, and agreeable to the ſtrain of human ſentiments and of human language, that in many caſes the beauty which originally and properly is in the thing ſignified, ſhould be transferred to the ſign; that which is in the cauſe to the effect; that which is in the end to the means; and that which is in the agent to the inſtrument.

If what was ſaid in the laſt chapter of the diſtinction between the grandeur which we aſcribe to qualities of mind, and that which we aſcribe to material objects, be well founded, this diſtinction of the beauty of objects will eaſily be admitted as perfectly analogous to it. I ſhall therefore only illuſtrate it by an example.

There is nothing in the exterior of a man more lovely and more attractive than perfect good breeding. But what is this good breeding? It conſiſts of all the external ſigns of due reſpect to our ſuperiors, condeſcenſion to our inferiors, politeneſs to all with whom we converſe or have to do, joined in the fair ſex with that delicacy of outward behaviour which becomes them. And how comes it to have ſuch charms in the eyes of all mankind? For this reaſon only, as I apprehend, that it is a natural ſign of that temper, and thoſe affections and ſentiments with regard to others, and with regard to ourſelves, which are in themſelves truly amiable and beautiful.

This is the original, of which good breeding is the picture; and it is the beauty of the original that is reflected to our ſenſe by the picture. The beauty of good breeding, therefore, is not originally in the external behaviour in which it conſiſts, but is deri-

qualities of mind which it expreſſes. And though
breeding without the amiable qualities of mind,
from what it naturally expreſſes.

theſe diſtinctions of our ſenſe of beauty into
and of beauty itſelf into original and de-
now proceed to give a general view of thoſe quali-
to which we may juſtly and rationally aſcribe beau-
or original or derived.

But here ſome embarraſſment ariſes from the vague meaning of the word beauty, which I had occaſion before to obſerve.

Sometimes it is extended, ſo as to include every thing that pleaſes a good taſte, and ſo comprehends grandeur and novelty, as well as what in a more reſtricted ſenſe is called beauty. At other times, it is even by good writers confined to the objects of ſight, when they are either ſeen, or remembered, or imagined. Yet it is admitted by all men, that there are beauties in muſic; that there is beauty as well as ſublimity in compoſition, both in verſe and in proſe; that there is beauty in characters, in affections, and in actions. Theſe are not objects of ſight; and a man may be a good judge of beauty of various kinds, who has not the faculty of ſight.

To give a determinate meaning to a word ſo variouſly extended and reſtricted, I know no better way than what is ſuggeſted by the common diviſion of the objects of taſte into novelty, grandeur, and beauty. Novelty, it is plain, is no quality of the new object, but merely a relation which it has to the knowledge of the perſon to whom it is new. Therefore, if this general diviſion be juſt, every quality in an object that pleaſes a good taſte, muſt, in one degree or another, have either grandeur or beauty. It may ſtill be difficult to fix the preciſe limit betwixt grandeur and beauty;

every thing fitted by its ne-

In a poem, in a picture, in a piece of muſic, it is real excellence that pleaſes a good taſte. In a perſon, every perfection of the mind, moral or intellectual, and every perfection of the body, gives pleaſure to the ſpectator as well as to the owner, when there is no envy nor malignity to deſtroy that pleaſure.

It is therefore in the ſcale of perfection and real excellence that we muſt look for what is either grand or beautiful in objects. What is the proper object of admiration is grand, and what is the proper object of love and eſteem is beautiful.

This, I think, is the only notion of beauty that correſponds with the diviſion of the objects of taſte which has been generally received by Philoſophers. And this connection of beauty, with real perfection, was a capital doctrine of the Socratic ſchool. It is often aſcribed to SOCRATES in the dialogues of PLATO and of XENOPHON.

We may therefore take a view, firſt, of thoſe qualities of mind to which we may juſtly and rationally aſcribe beauty, and then of the beauty we perceive in the objects of ſenſe. We ſhall find, if I miſtake not, that, in the firſt, original beauty is to be found, and that the beauties of the ſecond claſs are derived from ſome relation they bear to mind, as the ſigns or expreſſions of ſome amiable mental quality, or as the effects of deſign, art, and wiſe contrivance.

As grandeur naturally produces admiration, beauty naturally produces love. We may therefore juſtly aſcribe beauty to thoſe qualities which are the natural objects of love and kind affection.

Of this kind chiefly are ſome of the moral virtues, which in a peculiar manner conſtitute a lovely character. Innocence, gentleneſs, condeſcenſion, humanity, natural affection, public ſpirit, and [redacted] gentle virtues. Theſe qualities are [redacted], and on account of their intrinſic

There

tues that raiſe admiration, and are therefore
nanimity, fortitude, ſelf-command, ſuperiori-
r, ſuperiority to pleaſure, and to the ſmiles of
her frowns.

tues conſtitute what is moſt grand in the human
ntle virtues, what is moſt beautiful and lovely.
ues, they draw the approbation of our moral fa-
culty; as they are becoming and amiable, they affect our ſenſe of beauty.

Next to the amiable moral virtues, there are many intellectual talents which have an intrinſic value, and draw our love and eſteem to thoſe who poſſeſs them. Such are, knowledge, good ſenſe, wit, humour, cheerfulneſs, good taſte, excellence in any of the fine arts, in eloquence, in dramatic action; and we may add, excellence in every art of peace or war that is uſeful in ſociety.

There are likewiſe talents which we refer to the body, which have an original beauty and comelineſs; ſuch as health, ſtrength, and agility, the uſual attendants of youth; ſkill in bodily exerciſes, and ſkill in the mechanic arts. Theſe are real perfections of the man, as they increaſe his power, and render the body a fit inſtrument for the mind.

I apprehend, therefore, that it is in the moral and intellectual perfections of mind, and in its active powers, that beauty originally dwells; and that from this as the fountain, all the beauty which we perceive in the viſible world is derived.

This, I think, was the opinion of the ancient Philoſophers before named; and it has been adopted by Lord SHAFTESBURY and Dr AKENSIDE among the moderns.

" Mind,

" Mind, mind alone! bear witneſs earth and heav'n,
" The living fountains in itſelf contains
" Of beauteous and ſublime. Here hand in hand
" Sit paramount the graces. Here enthron'd,
" Celeſtial Venus, with divineſt airs,
" Invites the ſoul to never-fading joy." AKENSIDE.

But neither mind, nor any of its qualities or powers, is an immediate object of perception to man. We are, indeed, immediately conſcious of the operations of our own mind; and every degree of perfection in them gives the pureſt pleaſure, with a proportional degree of ſelf-eſteem, ſo flattering to ſelf-love, that the great difficulty is to keep it within juſt bounds, ſo that we may not think of ourſelves above what we ought to think.

Other minds we perceive only through the medium of material objects, on which their ſignatures are impreſſed. It is through this medium that we perceive life, activity, wiſdom, and every moral and intellectual quality in other beings. The ſigns of thoſe qualities are immediately perceived by the ſenſes; by them the qualities themſelves are reflected to our underſtanding; and we are very apt to attribute to the ſign the beauty or the grandeur, which is properly and originally in the things ſignified.

The inviſible Creator, the Fountain of all perfection, hath ſtamped upon all his works ſignatures of his divine wiſdom, power, and benignity, which are viſible to all men. The works of men in ſcience, in the arts of taſte, and in the mechanical arts, bear the ſignatures of thoſe qualities of mind which were employed in their production. Their external behaviour and conduct in life expreſſes the good or bad qualities of their mind.

In every ſpecies of animals, we perceive by viſible ſigns their inſtincts, their appetites, their affections, their ſagacity. Even in the

ESSAY VIII.

[redacted] there are many things analogous to the qua-
[redacted]t there is hardly any thing belonging to mind
[redacted]epreſented by images taken from the objects of
[redacted]her hand, every object of ſenſe is beautified,
[redacted]e from the attributes of mind.

[redacted]ies of mind, though inviſible in themſelves, are
perceived in the objects of ſenſe, on which their image is impreſſed.

If we conſider, on the other hand, the qualities in ſenſible objects to which we aſcribe beauty, I apprehend we ſhall find in all of them ſome relation to mind, and the greateſt in thoſe that are moſt beautiful.

When we conſider inanimate matter abſtractly, as a ſubſtance endowed with the qualities of extenſion, ſolidity, diviſibility, and mobility, there ſeems to be nothing in theſe qualities that affects our ſenſe of beauty. But when we contemplate the globe which we inhabit, as fitted by its form, by its motions, and by its furniture, for the habitation and ſupport of an infinity of various orders of living creatures, from the loweſt reptile up to man, we have a glorious ſpectacle indeed! with which the grandeſt and the moſt beautiful ſtructures of human art can bear no compariſon.

The only perfection of dead matter is its being, by its various forms and qualities, ſo admirably fitted for the purpoſes of animal life, and chiefly that of man. It furniſhes the materials of every art that tends to the ſupport or the embelliſhment of human life. By the Supreme Artiſt, it is organiſed in the various tribes of the vegetable kingdom, and endowed with a kind of life; a work which human art cannot imitate, nor human underſtanding comprehend.

In the bodies and various organs of [redacted]
a compoſition of matter ſtill more wond[redacted]

though we ſee it to be admirably adapted to the purpoſes and manner of life of every ſpecies. But in every form, unorganiſed, vegetable, or animal, it derives its beauty from the purpoſes to which it is ſubſervient, or from the ſigns of wiſdom, or of other mental qualities which it exhibits.

The qualities of inanimate matter, in which we perceive beauty, are, ſound, colour, form, and motion; the firſt an object of hearing, the other three of ſight; which we may conſider in order.

In a ſingle note, ſounded by a very fine voice, there is a beauty which we do not perceive in the ſame note, ſounded by a bad voice, or an imperfect inſtrument. I need not attempt to enumerate the perfections in a ſingle note, which give beauty to it. Some of them have names in the ſcience of muſic, and there perhaps are others which have no names. But I think it will be allowed, that every quality which gives beauty to a ſingle note, is a ſign of ſome perfection, either in the organ, whether it be the human voice or an inſtrument, or in the execution. The beauty of the ſound is both the ſign and the effect of this perfection; and the perfection of the cauſe is the only reaſon we can aſſign for the beauty of the effect.

In a compoſition of ſounds, or a piece of muſic, the beauty is either in the harmony, the melody, or the expreſſion. The beauty of expreſſion muſt be derived, either from the beauty of the thing expreſſed, or from the art and ſkill employed in expreſſing it properly.

In harmony, the very names of concord and diſcord are metaphorical, and ſuppoſe ſome analogy between the relations of ſound, [redacted] applied, and the relations of minds [redacted]ginally and properly ſignify.

[redacted] ear, when two or more perſons of

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a good voice and ear, converſe together in amity and friendſhip, the tones of their different voices are concordant, but become diſcordant when they give vent to angry paſſions; ſo that, without hearing what is ſaid, one may know by the tones of the different voices, whether they quarrel or converſe amicably. This, indeed, is not ſo eaſily perceived in thoſe who have been taught, by good-breeding, to ſuppreſs angry tones of voice, even when they are angry, as in the loweſt rank, who expreſs their angry paſſions without any reſtraint.

When diſcord ariſes occaſionally in converſation, but ſoon terminates in perfect amity, we receive more pleaſure than from perfect unanimity. In like manner, in the harmony of muſic, diſcordant ſounds are occaſionally introduced, but it is always in order to give a reliſh to the moſt perfect concord that follows.

Whether theſe analogies, between the harmony of a piece of muſic, and harmony in the intercourſe of minds, be merely fanciful, or have any real foundation in fact, I ſubmit to thoſe who have a nicer ear, and have applied it to obſervations of this kind. If they have any juſt foundation, as they ſeem to me to have, they ſerve to account for the metaphorical application of the names of concord and diſcord to the relations of ſounds; to account for the pleaſure we have from harmony in muſic; and to ſhow, that the beauty of harmony is derived from the relation it has to agreeable affections of mind.

With regard to melody, I leave it to the adepts in the ſcience of muſic, to determine, whether muſic, compoſed according to the eſtabliſhed rules of harmony and melody, can be altogether void of expreſſion; and whether muſic that has no expreſſion can have any beauty. To me it ſeems, that every ſtrain in melody that is agreeable, is an imitation of the tones of the human voice in the expreſſion of ſome ſentiment or paſſion, or an imitation of ſome other object in nature; and that muſic, as well as poetry, is an imitative art.

The

The ſenſe of beauty in the colours, and in the motions of inanimate objects, is, I believe, in ſome caſes inſtinctive. We ſee, that children and ſavages are pleaſed with brilliant colours and ſprightly motions. In perſons of an improved and rational taſte, there are many ſources from which colours and motions may derive their beauty. They, as well as the forms of objects, admit of regularity and variety. The motions produced by machinery, indicate the perfection or imperfection of the mechaniſm, and may be better or worſe adapted to their end, and from that derive their beauty or deformity.

The colours of natural objects, are commonly ſigns of ſome good or bad quality in the object; or they may ſuggeſt to the imagination ſomething agreeable or diſagreeable.

In dreſs and furniture, faſhion has a conſiderable influence on the preference we give to one colour above another.

A number of clouds of different and ever-changing hue, ſeen on the ground of a ſerene azure ſky at the going down of the ſun, preſent to the eye of every man a glorious ſpectacle. It is hard to ſay, whether we ſhould call it grand or beautiful. It is both in a high degree. Clouds towering above clouds, variouſly tinged, according as they approach nearer to the direct rays of the ſun, enlarge our conceptions of the regions above us. They give us a view of the furniture of thoſe regions, which, in an unclouded air, ſeem to be a perfect void; but are now ſeen to contain the ſtores of wind and rain, bound up for the preſent, but to be poured down upon the earth in due ſeaſon. Even the ſimple ruſtic does not look upon this beautiful ſky, merely as a ſhow to pleaſe the eye, but as a happy omen of fine weather to come.

The proper arrangement of colour, and of light and ſhade, is one of the chief beauties of painting; but this beauty is greateſt, when that arrangement gives the moſt diſtinct, the moſt natural,

CHAP. IV. and the moſt agreeable image of that which the painter intended to repreſent.

If we conſider, in the laſt place, the beauty of form or figure in inanimate objects, this, according to Dr HUTCHESON, reſults from regularity, mixed with variety. Here it ought to be obſerved, that regularity, in all caſes, expreſſes deſign and art: For nothing regular was ever the work of chance; and where regularity is joined with variety, it expreſſes deſign more ſtrongly. Beſides, it has been juſtly obſerved, that regular figures are more eaſily and more perfectly comprehended by the mind than the irregular, of which we can never form an adequate conception.

Although ſtraight lines and plain ſurfaces have a beauty from their regularity, they admit of no variety, and therefore are beauties of the loweſt order. Curve lines and ſurfaces admit of infinite variety, joined with every degree of regularity; and therefore, in many caſes, excel in beauty thoſe that are ſtraight.

But the beauty ariſing from regularity and variety, muſt always yield to that which ariſes from the fitneſs of the form for the end intended. In every thing made for an end, the form muſt be adapted to that end; and every thing in the form that ſuits the end, is a beauty; every thing that unfits it for its end, is a deformity.

The forms of a pillar, of a ſword, and of a balance are very different. Each may have great beauty; but that beauty is derived from the fitneſs of the form, and of the matter for the purpoſe intended.

Were we to conſider the form of the earth itſelf, and the various furniture it contains, of the inanimate kind; its diſtribution into land and ſea, mountains and valleys, rivers and ſprings of water, the variety of ſoils that cover its ſurface, and of mineral and metallic ſubſtances

ſubſtances laid up within it, the air that ſurrounds it, the viciſſitudes of day and night, and of the ſeaſons; the beauty of all theſe, which indeed is ſuperlative, conſiſts in this, that they bear the moſt lively and ſtriking impreſſion of the wiſdom and goodneſs of their Author, in contriving them ſo admirably for the uſe of man, and of their other inhabitants.

The beauties of the vegetable kingdom are far ſuperior to thoſe of inanimate matter, in any form which human art can give it. Hence, in all ages, men have been fond to adorn their perſons and their habitations with the vegetable productions of nature.

The beauties of the field, of the foreſt, and of the flower-garden, ſtrike a child long before he can reaſon. He is delighted with what he ſees; but he knows not why. This is inſtinct, but it is not confined to childhood; it continues through all the ſtages of life. It leads the Floriſt, the Botaniſt, the Philoſopher, to examine and compare the objects which Nature, by this powerful inſtinct, recommends to his attention. By degrees, he becomes a Critic in beauties of this kind, and can give a reaſon why he prefers one to another. In every ſpecies, he ſees the greateſt beauty in the plants or flowers that are moſt perfect in their kind, which have neither ſuffered from unkindly ſoil, nor inclement weather; which have not been robbed of their nouriſhment by other plants, nor hurt by any accident. When he examines the internal ſtructure of thoſe productions of Nature, and traces them from their embryo ſtate in the ſeed to their maturity, he ſees a thouſand beautiful contrivances of Nature, which feaſt his underſtanding more than their external form delighted his eye.

Thus, every beauty in the vegetable creation, of which he has formed any rational judgment, expreſſes ſome perfection in the object, or ſome wiſe contrivance in its Author.

In the animal kingdom, we perceive ſtill greater beauties than in

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in the vegetable. Here we obſerve life, and ſenſe, and activity, various inſtincts and affections, and, in many caſes, great ſagacity. Theſe are attributes of mind, and have an original beauty.

As we allow to brute animals a thinking principle or mind, though far inferior to that which is in man; and as, in many of their intellectual and active powers, they very much reſemble the human ſpecies, their actions, their motions, and even their looks, derive a beauty from the powers of thought which they expreſs.

There is a wonderful variety in their manner of life; and we find the powers they poſſeſs, their outward form, and their inward ſtructure, exactly adapted to it. In every ſpecies, the more perfectly any individual is fitted for its end and manner of life, the greater is its beauty.

In a race-horſe, every thing that expreſſes agility, ardour, and emulation, gives beauty to the animal. In a pointer, acuteneſs of ſcent, eagerneſs on the game, and tractableneſs, are the beauties of the ſpecies. A ſheep derives its beauty from the fineneſs and quantity of its fleece; and in the wild animals, every beauty is a ſign of their perfection in their kind.

It is an obſervation of the celebrated LINNÆUS, that, in the vegetable kingdom, the poiſonous plants have commonly a lurid and diſagreeable appearance to the eye, of which he gives many inſtances. I apprehend the obſervation may be extended to the animal kingdom, in which we commonly ſee ſomething ſhocking to the eye in the noxious and poiſonous animals.

The beauties which Anatomiſts and Phyſiologiſts deſcribe in the internal ſtructure of the various tribes of animals; in the organs of ſenſe, of nutrition, and of motion, are expreſſive of wiſe deſign and contrivance, in fitting them for the various kinds of life for which they are intended.

Thus,

Thus, I think, it appears, that the beauty which we perceive in the inferior animals, is expreſſive, either of ſuch perfections as their ſeveral natures may receive, or expreſſive of wiſe deſign in him who made them, and that their beauty is derived from the perfections which it expreſſes.

But of all the objects of ſenſe, the moſt ſtriking and attractive beauty is perceived in the human ſpecies, and particularly in the fair ſex.

MILTON repreſents Satan himſelf, in ſurveying the furniture of this globe, as ſtruck with the beauty of the firſt happy pair.

> Two of far nobler ſhape, erect and tall,
> Godlike erect! with native honour clad
> In naked majeſty, ſeem'd lords of all.
> And worthy ſeem'd, for in their looks divine,
> The image of their glorious Maker, ſhone
> Truth, wiſdom, ſanctitude ſevere, and pure;
> Severe, but in true filial freedom plac'd,
> Whence true authority in man; though both
> Not equal, as their ſex not equal ſeem'd,
> For contemplation he, and valour form'd,
> For ſoftneſs ſhe, and ſweet attractive grace.

In this well known paſſage of MILTON, we ſee that this great Poet derives the beauty of the firſt pair in Paradiſe from thoſe expreſſions of moral and intellectual qualities which appeared in their outward form and demeanour.

The moſt minute and ſyſtematical account of beauty in the human ſpecies, and particularly in the fair ſex, I have met with, is in *Crito; or, a Dialogue on Beauty*, ſaid to be written by the author of *Polymetis*, and republiſhed by DODSLEY in his collection of fugitive pieces.

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I ſhall borrow from that author ſome obſervations, which, I think, tend to ſhow that the beauty of the human body is derived from the ſigns it exhibits of ſome perfection of the mind or perſon.

All that can be called beauty in the human ſpecies may be reduced to theſe four heads; colour, form, expreſſion, and grace. The two former may be called the body, the two latter the ſoul of beauty.

The beauty of colour is not owing ſolely to the natural livelineſs of fleſh-colour and red, nor to the much greater charms they receive from being properly blended together; but is alſo owing, in ſome degree, to the idea they carry with them of good health, without which all beauty grows languid and leſs engaging, and with which it always recovers an additional ſtrength and luſtre. This is ſupported by the authority of CICERO. *Venuſtas et pulchritudo corporis ſecerni non poteſt a valetudine.*

Here I obſerve, that as the colour of the body is very different in different climates, every nation preferring the colour of its climate; and as among us one man prefers a fair beauty, another a brunette, without being able to give any reaſon for this preference; this diverſity of taſte has no ſtandard in the common principles of human nature, but muſt ariſe from ſomething that is different in different nations, and in different individuals of the ſame nation.

I obſerved before, that faſhion, habit, aſſociations, and perhaps ſome peculiarity of conſtitution, may have great influence upon this internal ſenſe, as well as upon the external. Setting aſide the judgments ariſing from ſuch cauſes, there ſeems to remain nothing that, according to the common judgment of mankind, can be called beauty in the colour of the ſpecies, but what expreſſes perfect health and livelineſs, and in the fair ſex ſoftneſs and delicacy; and nothing that can be called deformity but what indicates diſeaſe and decline. And if this be ſo, it follows that the beauty of

of colour is derived from the perfections which it expreſſes. This, however, of all the ingredients of beauty, is the leaſt.

The next in order is form, or proportion of parts. The moſt beautiful form, as the author thinks, is that which indicates delicacy and ſoftneſs in the fair ſex, and in the male either ſtrength or agility. The beauty of form, therefore, lies all in expreſſion.

The third ingredient, which has more power than either colour or form, he calls expreſſion, and obſerves, that it is only the expreſſion of the tender and kind paſſions that gives beauty; that all the cruel and unkind ones add to deformity; and that, on this account, good nature may very juſtly be ſaid to be the beſt feature, even in the fineſt face. Modeſty, ſenſibility, and ſweetneſs, blended together, ſo as either to enliven or to correct each other, give almoſt as much attraction as the paſſions are capable of adding to a very pretty face.

It is owing, ſays the author, to the great force of pleaſingneſs which attends all the kinder paſſions, that lovers not only ſeem, but really are, more beautiful to each other than they are to the reſt of the world; becauſe, when they are together, the moſt pleaſing paſſions are more frequently exerted in each of their faces than they are in either before the reſt of the world. There is then, as a French author very well expreſſes it, a ſoul upon their countenances, which does not appear when they are abſent from one another, or even in company that lays a reſtraint upon their features.

There is a great difference in the ſame face, according as the perſon is in a better or a worſe humour, or more or leſs lively. The beſt complexion, the fineſt features, and the exacteſt ſhape, without any thing of the mind expreſſed in the face, is inſipid and unmoving. The fineſt eyes in the world, with an exceſs of malice or rage in them, will grow ſhocking. The paſſions can

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give beauty without the aſſiſtance of colour or form, and take it away where theſe have united moſt ſtrongly to give it; and therefore this part of beauty is greatly ſuperior to the other two.

The laſt and nobleſt part of beauty is grace, which the author thinks undefinable.

Nothing cauſes love ſo generally and irreſiſtibly as grace. Therefore, in the mythology of the Greeks and Romans, the Graces were the conſtant attendants of VENUS the goddeſs of love. Grace is like the ceſtus of the ſame goddeſs, which was ſuppoſed to comprehend every thing that was winning and engaging, and to create love by a ſecret and inexplicable force, like that of ſome magical charm.

There are two kinds of grace, the majeſtic and the familiar; the firſt more commanding, the laſt more delightful and engaging. The Grecian Painters and Sculptors uſed to expreſs the former moſt ſtrongly in the looks and attitudes of their MINERVAS, and the latter in thoſe of VENUS. This diſtinction is marked in the deſcription of the perſonages of Virtue and Pleaſure in the ancient fable of the Choice of HERCULES.

Graceful, but each with different grace they move,
This ſtriking ſacred awe, that ſofter winning love.

In the perſons of ADAM and EVE in Paradiſe, MILTON has made the ſame diſtinction.

For contemplation he, and valour form'd,
For ſoftneſs ſhe, and ſweet attractive grace.

Though grace be ſo difficult to be defined, there are two things that hold univerſally with relation to it. *Firſt*, There is no grace without motion; ſome genteel or pleaſing motion, either of the whole

whole body or of ſome limb, or at leaſt ſome feature. Hence, in the face, grace appears only on thoſe features that are moveable, and change with the various emotions and ſentiments of the mind, ſuch as the eyes and eye-brows, the mouth and parts adjacent. When VENUS appeared to her ſon ÆNEAS in diſguiſe, and, after ſome converſation with him, retired, it was by the grace of her motion in retiring that he diſcovered her to be truly a goddeſs.

Dixit, et avertens roſeâ cervice refulſit,
Ambroſiæque comæ divinum vertice odorem
Spiravere; pedes veſtis defluxit ad imos;
Et vera inceſſu patuit dea. Ille, ubi matrem
Agnovit, &c.

A *ſecond* obſervation is, That there can be no grace with impropriety, or that nothing can be graceful that is not adapted to the character and ſituation of the perſon.

From theſe obſervations, which appear to me to be juſt, we may, I think, conclude, that grace, as far as it is viſible, conſiſts of thoſe motions, either of the whole body, or of a part or feature, which expreſs the moſt perfect propriety of conduct and ſentiment in an amiable character.

Thoſe motions muſt be different in different characters; they muſt vary with every variation of emotion and ſentiment; they may expreſs either dignity or reſpect, confidence or reſerve, love or juſt reſentment, eſteem or indignation, zeal or indifference. Every paſſion, ſentiment, or emotion, that in its nature and degree is juſt and proper, and correſponds perfectly with the character of the perſon, and with the occaſion, is what we may call the ſoul of grace. The body or viſible part conſiſts of thoſe motions and features which give the true and unaffected expreſſion of this ſoul.

Thus, I think, all the ingredients of human beauty, as they

CHAP. IV. are enumerated and deſcribed by this ingenious author, terminate in expreſſion: They either expreſs ſome perfection of the body, as a part of the man, and an inſtrument of the mind, or ſome amiable quality or attribute of the mind itſelf.

It cannot indeed be denied, that the expreſſion of a fine countenance may be unnaturally disjoined from the amiable qualities which it naturally expreſſes: But we preſume the contrary, till we have clear evidence; and even then, we pay homage to the expreſſion, as we do to the throne when it happens to be unworthily filled.

Whether what I have offered to ſhew, that all the beauty of the objects of ſenſe is borrowed, and derived from the beauties of mind which it expreſſes or ſuggeſts to the imagination, be well founded or not; I hope this terreſtrial VENUS will not be deemed leſs worthy of the homage which has always been paid to her, by being conceived more nearly allied to the celeſtial, than ſhe has commonly been repreſented.

To make an end of this ſubject, taſte ſeems to be progreſſive as man is. Children, when refreſhed by ſleep, and at eaſe from pain and hunger, are diſpoſed to attend to the objects about them; they are pleaſed with brilliant colours, gaudy ornaments, regular forms, cheerful countenances, noiſy mirth, and glee. Such is the taſte of childhood, which we muſt conclude to be given for wiſe purpoſes. A great part of the happineſs of that period of life is derived from it; and therefore it ought to be indulged. It leads them to attend to objects which they may afterwards find worthy of their attention. It puts them upon exerting their infant faculties of body and mind, which, by ſuch exertions, are daily ſtrengthened and improved.

throw a ſhade upon thoſe they formerly admired. They delight in feats of agility, ſtrength, and art; they love thoſe that excel in them, and ſtrive to equal them. In the tales and fables they hear, they begin to diſcern beauties of mind. Some characters and actions appear lovely, others give diſguſt. The intellectual and moral powers begin to open, and, if cheriſhed by favourable circumſtances, advance gradually in ſtrength, till they arrive at that degree of perfection, to which human nature, in its preſent ſtate, is limited.

In our progreſs from infancy to maturity, our faculties open in a regular order appointed by Nature; the meaneſt firſt; thoſe of more dignity in ſucceſſion, until the moral and rational powers finiſh the man. Every faculty furniſhes new notions, brings new beauties into view, and enlarges the province of taſte; ſo that we may ſay, there is a taſte of childhood, a taſte of youth, and a manly taſte. Each is beautiful in its ſeaſon; but not ſo much ſo, when carried beyond its ſeaſon. Not that the man ought to diſlike the things that pleaſe the child, or the youth, but to put leſs value upon them, compared with other beauties, with which he ought to be acquainted.

Our moral and rational powers juſtly claim dominion over the whole man. Even taſte is not exempted from their authority; it muſt be ſubject to that authority in every caſe wherein we pretend to reaſon or diſpute about matters of taſte; it is the voice of reaſon that our love or our admiration ought to be proportioned to the merit of the object. When it is not grounded on real worth, it muſt be the effect of conſtitution, or of ſome habit or caſual aſſociation. A fond mother may ſee a beauty in her darling child, or a fond author in his work, to which the reſt of the world are blind. In ſuch caſes, the affection is pre-engaged, and, as it were, bribes the judgment, to make the object worthy of that affection. For the mind cannot be eaſy in putting a value upon an object beyond what it conceives to be due. When affection

CHAP. IV. tion is not carried away by ſome natural or acquired bias, it naturally is and ought to be led by the judgment.

As, in the diviſion which I have followed of our intellectual powers, I mentioned moral perception and conſciouſneſs, the reader may expect that ſome reaſon ſhould be given, why they are not treated of in this place.

As to conſciouſneſs; what I think neceſſary to be ſaid upon it has been already ſaid, Eſſay 6. chap. 5. As to the faculty of moral perception, it is indeed a moſt important part of human underſtanding, and well worthy of the moſt attentive conſideration, ſince without it we could have no conception of right and wrong, of duty and moral obligation, and ſince the firſt principles of morals, upon which all moral reaſoning muſt be grounded, are its immediate dictates; but as it is an active as well as an intellectual power, and has an immediate relation to the other active powers of the mind, I apprehend that it is proper to defer the conſideration of it till theſe be explained.

THE END.

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